

Draft
Environmental Impact Report

for

Anaheim Stadium Area Master Land Use Plan

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Michael Brandman Associates

October 1998

**ANAHEIM STADIUM AREA
MASTER LAND USE PLAN
DRAFT EIR NO. 321
SCH. 9611041**

Prepared for:

City of Anaheim
Planning Department
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Anaheim, California 92805

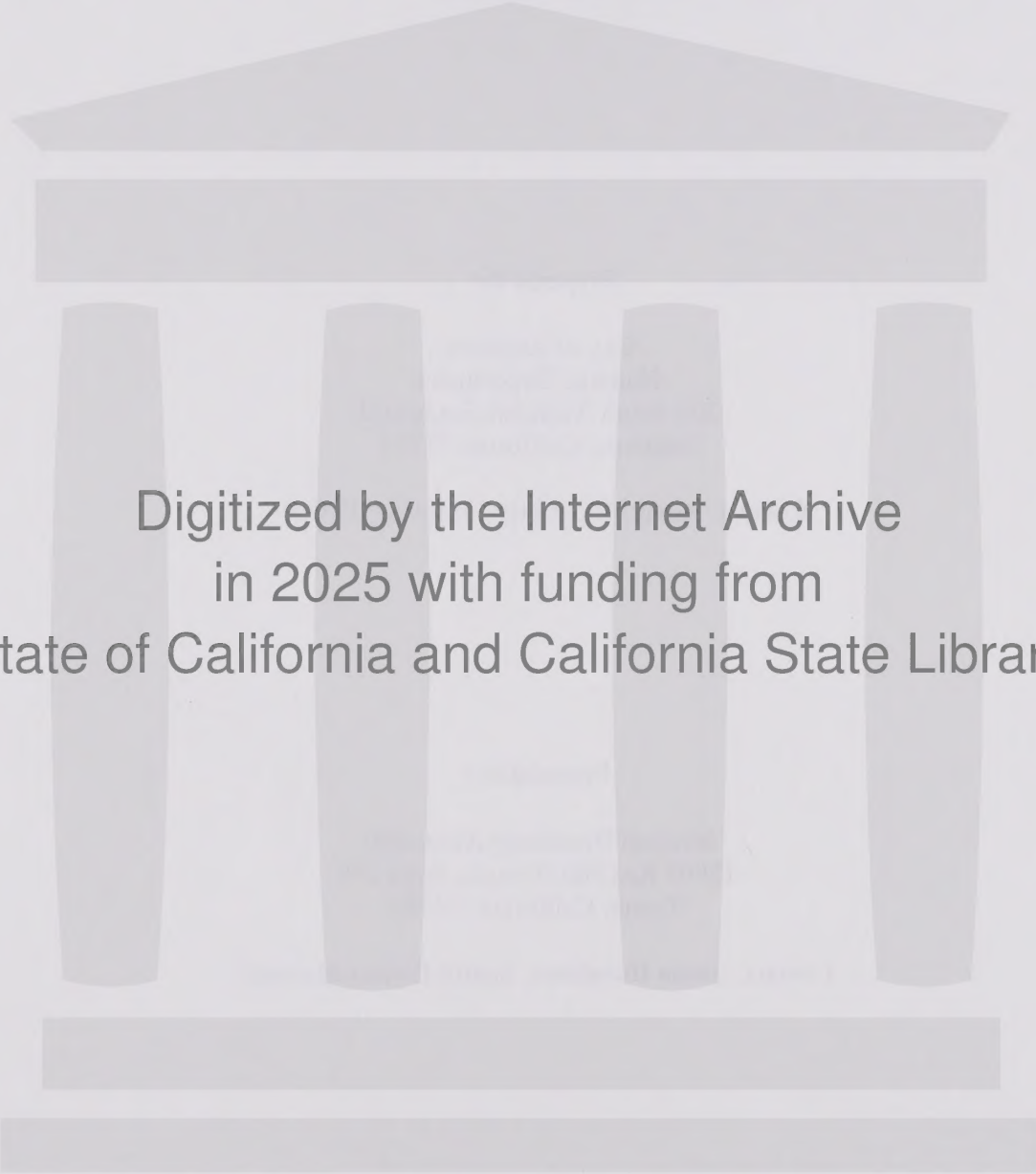
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October 1998



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SECTION 1 INTRODUCTION

1.1 PURPOSE AND SCOPE OF THE EIR

PURPOSE OF THE EIR

The City of Anaheim is the lead agency under the California Environmental Quality Act (CEQA) and is responsible for preparation of the Anaheim Stadium Area Master Land Use Plan (MLUP) EIR. This EIR has been prepared in conformance with the CEQA (California Public Resources Code §§ 21000 et seq.), California CEQA Guidelines (California Code of Regulations, Title 14, §§ 15000 et seq.), and City of Anaheim CEQA Guidelines. It is intended to serve as an informational document for the public agency decision-makers and the general public regarding the objectives and components of the proposed project, as well as the potential environmental impacts, and describe mitigation measures and reasonable alternatives to the project. This EIR is further intended to serve as the primary environmental document for subsequent actions within the MLUP project area, including all local discretionary approvals requested to implement the MLUP. In addition, this EIR is the primary reference document in the formulation and implementation of a mitigation reporting and monitoring program for the MLUP. It is the intent of the City to use the EIR to permit the maximum amount of development proposed in the MLUP area consistent with the capacity of the area's infrastructure. Future developments that require additional discretionary review (i.e., conditional use permit, building permit, variance, etc.) may require subsequent environmental review in compliance with the State CEQA Guidelines, and will utilize this document for CEQA purposes.

The City of Anaheim, which has the principal responsibility for processing and approving the project, and other public agencies (i.e., Responsible Agencies) that may use this EIR in the decision making or permit process will consider the information in this EIR along with other information that may be presented during the CEQA process. A more detailed discussion and identification of the Responsible Agencies is provided in Section 3, Project Description, of this document. In accordance with CEQA, the public agencies will be required to make findings for each environmental impact of the project that cannot be mitigated to below a level of significance. If the lead agency and responsible agencies decide that the benefits of the proposed project outweigh unmitigated significant environmental effects, they will be required to make a statement of overriding considerations stating reasons to support their action.

This document analyzes the environmental effects of the proposed MLUP to the degree of specificity required by Section 15146 of the State CEQA Guidelines. The MLUP's purpose is to guide future development of a designated area rather than a specific proposal with detailed site plans. As such, the MLUP is intended to provide guidance and consistency for future developments within the MLUP area.

Adoption of the MLUP would not directly result in development impacts; however, future implementation of development within the Planning Area could indirectly result in development impacts from the MLUP. The scope of analysis in this EIR, therefore, addresses an exhaustive and all-inclusive range of impacts by considering the effects of development that may occur in the future.

The MLUP EIR is a Master EIR, as defined in Section 21157 of the California Public Resources Code, subd.(a). The Master EIR may be prepared for any of the following:

- General Plan Element, General Plan Amendment, or Specific Plan;
- A multi-planned project;
- Projects that follow a previously approved need or regulation;
- Projects consistent with a development agreement;
- Projects within and consistent with a redevelopment plan; and
- Transit projects that may be subject to multiple stages of review or approval.

The intent of the Master EIR legislation is to obviate the need for later redundant environmental review of subsequent discretionary activities or projects that follow the expected course of action previously approved. The Master EIR approach is appropriate for this project because it allows a comprehensive consideration of the reasonably anticipated scope of development under the project and will serve as the base document for any future environmental review necessary for development within the MLUP boundaries.

This Master EIR is also "project" or "project-specific" in that it is intended to environmentally clear: (1) adoption of the proposed MLUP; (2) development within the MLUP area which conforms to the parameters and assumptions addressed in the EIR; (3) developments proposed within the MLUP boundaries that are within the scope of the MLUP addressed in this EIR, and require no discretionary actions for future projects. However, specific development projects within the MLUP area, which do not conform to the parameters and assumptions addressed in this EIR, will require additional environmental review unless the City finds, after preparing an Initial Study: (1) that the subsequent project is within the scope of the Master EIR; (2) that the project will not cause any additional significant effects on the environment not described in the Master EIR; and (3) no new or additional mitigation measures or alternatives are required to mitigate the subsequent project's significant environmental impacts (California Public Resources Code, Section 21157.1, subd.(c)).

In order to be able to rely on this EIR as a Master EIR for more than 5 years, the City of Anaheim must do one of the following after 5 years have elapsed since certification: (1) review the EIR and make a finding that there are no substantial changes in the circumstances under which the EIR was certified, or that no new information, which was not known and could not have been known at the time of

certification, has become available; or (2) prepare and certify a subsequent or supplemental EIR that is incorporated into, and updates the EIR (California Public Resources Code, Section 21157.6).

This Draft EIR was prepared by a consultant under contract to the City of Anaheim. Prior to public review, it was extensively reviewed and evaluated by the City of Anaheim, and this Draft EIR reflects the independent judgement of the City of Anaheim as required by CEQA. Lists of organizations and persons consulted and the report preparation personnel are provided in Sections 9 and 10 of this EIR.

SCOPE OF THE EIR

This EIR addresses the potential environmental effects of the proposed project. The scope of the EIR includes the areas of controversy identified by the Notice of Preparation (NOP) issued by the City, as well as issues raised by agencies and the general public in response to the NOP, as described below.

Scoping Process

In compliance with the State CEQA Guidelines, the City of Anaheim has taken steps to maximize the public's opportunity to participate in the environmental process. A Notice of Preparation (NOP) was distributed on November 18, 1996, via certified mail to agencies and other interested parties to solicit comments and inform the public of the proposed project. The project was described, and the public was invited to review the NOP/Initial Study. Public comments on the issues discussed in the Initial Study were encouraged and solicited. The NOP, the distribution list for the NOP, the Initial Study, and comment letters received during and after the NOP review period are attached to this EIR as Appendix A.

Agencies, organizations, and interested parties not previously contacted or who did not respond to the NOP currently have the opportunity to comment during the 45-day public review period on the draft EIR.

1.2 EIR FOCUS AND EFFECTS FOUND TO BE NOT SIGNIFICANT

Based on the NOP, a determination was made that an EIR is required to evaluate the potentially significant environmental effects of the proposed project. The EIR should address all the potential environmental effects identified in the NOP. The potential significant issues that related to development of the project included land use; transportation and circulation; air quality; noise; earth resources; hydrology and water quality; employment, population, and housing; public services; utilities and energy; hazardous materials compliance; aesthetics; and cultural resources.

Environmental element(s) that were determined not to be significantly affected by the proposed project and, therefore, do not require evaluation in the EIR, per Section 15063(c) of the State CEQA Guidelines (as amended), were as follows:

- Biological Resources. Due to the developed character of the project area, the potential for sensitive plant and/or animal species to inhabit the site or surrounding area is considered highly unlikely; therefore, this EIR will not address the issue of biological resources.

1.3 COMPONENTS OF THE EIR ANALYSIS

The analysis of each environmental category within Section 5 is organized into the following subsections: Environmental Conditions; Environmental Impacts; Cumulative Impacts; Mitigation Measures; and Significant Unavoidable Adverse Impacts.

- "Environmental Conditions" describes the physical conditions that exist at this time and which may influence or affect the issue under investigation.
- "Environmental Impacts" describes potential environmental changes to the existing physical conditions that may occur if the proposed project is implemented.
- "Cumulative Impacts" describes the potential environmental changes to the existing physical conditions that may occur with the proposed project, together with all other reasonably foreseeable, planned, and approved future projects.
- "Mitigation Measures" are those specific measures which may be required of the project by the decision maker in order to: (1) avoid an impact; (2) minimize an impact; (3) rectify an impact by restoration; (4) reduce or eliminate an impact over time by preservation and maintenance operations; or (5) compensate for the impact by replacing or providing substitute resources or environment.
- "Significant Unavoidable Adverse Impacts" are identified where mitigation is not expected to reduce the project impacts to insignificant levels.

The EIR includes an alternatives discussion that analyzes a reasonable range of alternatives that could feasibly attain the basic objectives of the project and evaluates the comparative merits of the alternatives. This EIR includes an evaluation of the following alternatives to the proposed project: (1) a no-project alternative; (2) a no project/no development alternative; (3) a lower-intensity development alternative; (4) a higher-intensity development alternative; and (5) an environmentally superior alternative.

1.4 PROJECT SPONSORS AND CONTACT PERSONS

The City of Anaheim is the lead agency in the preparation of this EIR. Michael Brandman Associates is the environmental consultant to the City for the project. Preparers of this EIR are provided in Section 10. Key contact persons are as follows:

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Anaheim, CA 92803

Environmental Consultant:

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Jason Brandman, Senior Project Manager
15901 Red Hill Avenue, Suite 200
Tustin, CA 92780

1.5 REVIEW OF THE DRAFT EIR

This draft EIR was distributed to responsible and trustee agencies and surrounding cities. The draft EIR will be available for purchase by all interested parties in accordance with Public Resources Code 21092(b)(3) at the City of Anaheim Planning Department. In addition, during the 45-day public review period, the EIR, including the technical appendices, is available for review at the City of Anaheim, 200 South Anaheim Boulevard and at the following libraries: Canyon Hills Branch Library, Euclid Branch Library, Haskett Reading Center, and Sunkist Branch Library. The Notice of the Completion of the draft EIR was also distributed as required by CEQA.

Written comments on the draft EIR should be addressed to:

City of Anaheim
Planning Department
200 South Anaheim Boulevard
P.O. Box 3222
Anaheim, California 92803
Attn: Greg McCafferty, Associate Planner

Upon completion of the 45-day public review period, responses to all significant environmental issues raised will be prepared and available for review at least 10 days prior to the public hearing at which the certification of the Final Environmental Impact Report will be considered. These comments and their responses will be included as part of the environmental record for consideration by decision-makers for the project.

1.6 RELATED ENVIRONMENTAL DOCUMENTS

A number of adopted environmental and planning documents that were prepared for development projects (e.g., Anaheim Sports Center EIR, Anaheim Stadium Business Center EIR, etc.) within the vicinity of the project site, in addition to those prepared for the previous expansion of Anaheim

Stadium were used in the preparation of this EIR. These documents are hereby incorporated by reference and can be reviewed at the City of Anaheim, Planning Department.

SECTION 2

EXECUTIVE SUMMARY

2.1 INTRODUCTION

The City of Anaheim has proposed the adoption of the MLUP, which sets forth a comprehensive development program to enhance and revitalize an approximate 800-acre area encompassing The Edison International Field of Anaheim (herein referred to as the Stadium) and the 550-acre project area in the southern part of Anaheim, California. The project area is bounded by the Santa Ana River channel on the east, the Anaheim City Limit on the south (generally following Orangewood Avenue west of State College Boulevard, and approximately 0.5 mile south of Orangewood Avenue east of State College Boulevard), the Santa Ana Freeway (I-5) on the west, and the Edison Corridor on the north. The project area is accessible from the I-5, the Orange Freeway (SR-57), Katella Avenue, State College Boulevard, Orangewood Avenue, Lewis Street, and Anaheim Way. Additional access is provided through the Amtrak/MetroLink station adjacent to the Stadium.

The MLUP has been prepared to provide comprehensive land use planning and zoning in order to guide the development process. Implementation of the proposed project would allow new office, hotel and retail development adjacent to the existing stadium. The MLUP allows existing businesses in the MLUP area to continue in their present form, while facilitating the means for individual properties to take advantage of the new land uses and amenities. Future vehicular and pedestrian circulation, mass transit and rail connections to other parts of Southern California, and an integrated plan for both the Stadium site and the surrounding 550-acre project area are provided for within the MLUP.

2.2 PROJECT DESCRIPTION

The proposed project would be implemented through the use of a Zoning Overlay for the MLUP area. The Zoning Overlay would permit the regulations and standards of the underlying zone (current zoning) to be preserved, while adding special provisions, which may apply when a property is developed as a use allowed by the MLUP. The intent of using the Zoning Overlay is to allow the current uses to continue or expand within the provisions of existing zoning, while providing those who may want to develop as retail, office and/or hotel uses with standards appropriate to those uses, including increased land use intensity. The Zoning Overlay will also provide a means to adopt design guidelines for specific areas of the MLUP area. Under the proposed Zoning Overlay, the MLUP would divide the project site into six districts and allow for a total development of approximately 13.3 million square feet (msf). Approximately 10.5 msf exists or is under construction, as part of the Sportstown Anaheim project (Sportstown District), or is in the entitlement stage within the Arrowhead Pond District in the MLUP area. Implementation of the MLUP, under the proposed project, would

allow for 2.8 msf of new development within the project area under the proposed Zoning Overlay. This would include a net loss of industrial space of 491,303 square feet (sf), and increases of 1,871,285 sf of new office space, 452,026 sf of new retail space, and 991,603 sf of new hotel space.

2.3 AREAS OF CONTROVERSY/ISSUES TO BE RESOLVED

The EIR addresses the areas of controversy and issues which required resolution that were known to the City of Anaheim or were raised by agencies and the public during the scoping process. Many of these were identified during the NOP process, as described previously. The following summarizes the primary areas of controversy related to environmental effects which were raised during the public scoping process and the section of the EIR in which these issues are addressed:

- Project compatibility with surrounding land uses (Section 5.1, Land Use and Related Planning Programs).
- Area traffic impacts and project traffic on local streets (Section 5.2, Transportation and Circulation).
- Air quality impacts (Section 5.3, Air Quality)
- Noise from project-related traffic (Section 5.4, Noise).
- Effects on water quality and supply (Section 5.6, Hydrology and Water Quality)
- Effects on population and employment (Section 5.7, Employment, Population, and Housing)
- Public Services and Utilities (Section 5.8, Public Services, Utilities, and Energy Consumption).

The issues to be resolved by the City of Anaheim include the choice among alternatives, including the proposed project, and whether or how to mitigate the environmental effects of the proposed project.

2.4 SUMMARY OF ALTERNATIVES

The City of Anaheim has analyzed various alternatives to the proposed project to evaluate the opportunity for avoiding or substantially lessening environmental impacts. Section 6, Alternatives, provides detailed descriptions and analysis of each alternative in adequate detail to allow the decision maker to decide whether or not an alternative should be adopted in lieu of the proposed project as well as analysis of the environmentally superior alternative.

Section 15126(d) of the CEQA Guidelines requires that an EIR "describe a range of reasonable alternatives to the project, or to the location of the project, which could feasibly attain most of the basic

objectives of the project, and evaluate the comparative merits of the alternatives" but would avoid or substantially lessen any of the significant effects of the project.

For the MLUP EIR, an analysis of alternative location(s) was not pursued because such an alternative would not attain the basic objectives of the project. More specifically, the Anaheim Stadium area has been designated by the City of Anaheim as the project site with the intent to enhance existing onsite uses and develop additional complementary uses within the project area. The City's General Plan currently designates the project site for Commercial Recreation and Business/Office/Service/Industrial land uses in recognition of the desire to enhance the site and continue such uses in the City's long-term growth plans.

It is important to note that the proposed project, as addressed in the EIR, is a planning program particular to a geographic area. As such, it is contrary to the basic nature and objective of the project to consider applying the proposed MLUP to an alternate location.

This EIR includes an evaluation of the following land use alternatives to the proposed MLUP project:

- No Project
- No Project/No Development Alternative
- Lower-Intensity Development Alternative
- Higher-Intensity Development Alternative

The following summarizes the alternatives considered in detail in Section 6, Alternatives, of this EIR.

NO PROJECT ALTERNATIVE

The No Project Alternative assumes that future development of the proposed project site would occur under the assumptions established in the City of Anaheim General Plan.

General Plan Amendment No. 214 was adopted by the City to establish building intensities for the project area. The current General Plan Land Use designations for the site are Commercial, Recreation and Business, Office/Service/Industrial. Including the adjacent Sportstown District, the 800-acre MLUP area currently contains approximately 10.5 msf of development and approved development. Buildout under the General Plan would result in a total of 22,139,000 square feet (sf) of development including: 2,964,000 sf of commercial uses; 16,378,000 sf of office uses; and 2,797,000 sf of industrial uses. In comparison, total buildout under the proposed Zoning Overlay would result in 13,261,173 sf of development, which is approximately 8.9 msf less than this alternative.

NO PROJECT/NO DEVELOPMENT ALTERNATIVE

This alternative would essentially cease any new development within the project area. All uses currently in existence or under development would continue, and no substantial changes would occur. Thus, implementation of this alternative would maintain the approximate 10.5 msf of development now in use or being developed (i.e., Sportstown District). These existing and/or approved uses consist of approximately: 5,084,627 sf of industrial uses; 2,632,327 sf of office; 755,608 sf of retail; 265,000 sf of hotel; and 1,700,000 sf currently under development in the Sportstown District.

LOWER-INTENSITY DEVELOPMENT ALTERNATIVE

This alternative would reduce the density of development within each of the districts in the project site by 20 percent. This would reduce the total new development by approximately 0.6 msf to 2.24 msf. Buildout of the MLUP area would thus result in approximately 12.7 msf, versus the buildout level of 13.3 msf under the proposed project. Other aspects of the Lower-Intensity Development Alternative, including circulation improvements and design guidelines that facilitate a unified, civic-scaled public landscape, would remain similar to the proposed project. The general intent of this alternative is to reduce the overall impact of development at the site while creating a feasible alternative to the proposed project.

HIGHER-INTENSITY DEVELOPMENT ALTERNATIVE

Implementation of the Higher-Intensity Development Alternative would increase the development density within the MLUP area by approximately 3 msf over the proposed project. Hence, buildout of the MLUP area under this alternative would thus result in approximately 16.3 msf, versus the buildout level of approximately 13.3 msf under the proposed project. Other aspects of the Higher-Intensity Development Alternative, including circulation improvements and design guidelines that facilitate a unified, civic-scaled public landscape, would remain similar to the proposed project.

2.5 MITIGATION MONITORING PROGRAM

CEQA requires public agencies to set up monitoring or reporting programs for the purpose of ensuring compliance with those mitigation measures adopted as conditions of project approval in order to mitigate or avoid significant environmental effects identified in environmental impact reports. A mitigation monitoring program, incorporating the mitigation measures set forth in this document, will be adopted at the time of certification of the EIR.



CITY OF ANAHEIM, CALIFORNIA

Planning Department

PUBLIC NOTICE OF AVAILABILITY

SUBJECT:

Draft Master Environmental Impact Report (EIR) No. 321, Anaheim Stadium Area Master Land Use Plan

WHERE IS THE PROJECT AND WHAT IS PROPOSED:

The Draft Master Environmental Impact Report (EIR) has been prepared in compliance with the California Environmental Quality Act (CEQA) and the State and City of Anaheim CEQA Guidelines for the proposed Anaheim Stadium Area Master Land Use Plan (MLUP). The project area is bordered by the Edison transmission corridor on the north, the SR-57 (Orange) Freeway and the Santa Ana River on the east, the City limits near Orangewood Avenue on the south, and the I-5 (Santa Ana) Freeway on the west. The Anaheim Stadium Area MLUP is proposed to guide development of the approximately 550-acre Anaheim Stadium Area by providing additional land use opportunities for property owners. Further, the MLUP is intended to establish an overall identity for the project area including landscaping, gateway elements, signage, street furnishings and pageantry elements which are intended to create a consistent visual theme and unify the Anaheim Stadium Area with the Anaheim and Disneyland Resorts. The MLUP consists of a land use plan governing the types and intensity of proposed land uses by district; a master landscape plan for the public right-of-way and front setback areas of private properties; and, an identity plan that includes concepts regarding gateways, graphics and signage. The plan will also include design guidelines intended to implement the urban design principles contained in the MLUP, a streetscape program, and a public facilities plan. The plan area is currently zoned PR (Public Recreational), ML (Limited Industrial) and CO (Commercial, Office and Professional), CL (Commercial, Limited), CH (Commercial Heavy), RS-A-43,000 (Residential/Agricultural) and FP (Flood Plain Overlay). The proposed MLUP will not replace existing zoning. Rather, an overlay zone or other equivalent regulatory framework will be adopted as an implementing action of the plan. This approach allows property owners to retain their underlying zoning while having the option of transitioning to uses proposed in the MLUP.

Related actions, which are addressed in Draft Master EIR No. 321 and which may occur in conjunction with the proposed project described above include but are not limited to: general plan amendments, zone changes, conditional use permits, subdivision plans, financing mechanisms, owner participation agreements, disposition and development agreements and other agreements, abandonment of streets and subsurface rights, demolition permits, grading permits, building permits, encroachment permits, property acquisition, relocation, implementation and amendments to the Recovery Plan for the Anaheim Stadium Project Area, and revision to stadium area development fees.

Significant effects on the environment anticipated as a result of implementation of the MLUP include air quality, schools and solid waste.

INFORMATION AVAILABLE:

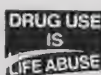
Copies of Draft Master EIR No. 321 and all documents referenced are available for review or arrangements can be made for review and/or purchase at the City of Anaheim Planning Department, 200 South Anaheim Boulevard, Anaheim, California 92805. Copies of Draft Master EIR No. 321 are also available for review at the Anaheim Main and the Canyon Hills Branch Libraries. For further information, please contact the Anaheim Planning Department at (714) 765-5139.

PUBLIC COMMENT PERIOD:

All interested parties are invited to submit written comments relating to the above project. Written comments should be submitted to the attention of Greg McCafferty, City of Anaheim Planning Department, 200 South Anaheim Boulevard, Anaheim, California 92805 on or before December 1, 1998. The public hearing process will commence following the public review period. A separate public notice advertising the hearing date will be provided.

Date: October 16, 1998
AP5087GM.DOC

200 South Anaheim Boulevard
P.O. Box 3222, Anaheim, California 92803 • (714) 765-5139 • www.anaheim.net



2.6 SUMMARY OF SIGNIFICANT ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

A detailed discussion and analysis of project impacts and recommended mitigation measures is presented in Section 5, Environmental Conditions, Environmental Impacts, Cumulative Impacts, Mitigation Measures, and Significant Unavoidable Adverse Impacts. However, there are some project-related impacts that are unavoidable and cannot be mitigated to a less than significant level. These impacts will remain significant after mitigation and are briefly summarized below:

- **Air Quality:** Implementation of the proposed project would result in significant, unavoidable short-term construction impacts on particulate matter (PM10) emissions, and significant, unavoidable long-term regional air quality impacts on carbon monoxide (CO), nitrogen oxides (NOx), and reactive organic compounds (ROC).
- **Schools:** Projected project fees will not cover the cost to the school districts associated with new students.
- **Solid Waste:** Because of limited landfill capacity, the impact to landfill capacity is expected to remain significant.

Additionally, the following significant cumulative impacts have been identified:

- Cumulative air quality impacts related to CO, NOx, and ROC which will exceed SCAQMD significance thresholds.
- Solid waste impacts because of limited landfill capacity.

SECTION 3 PROJECT DESCRIPTION

3.1 PROJECT LOCATION

The Anaheim Stadium Area MLUP area is located in the City of Anaheim, 35 miles southeast of downtown Los Angeles and 7 miles northwest of Santa Ana, in north Orange County. The regional setting of the project is shown in Exhibit 3-1, Regional Location. The project site is located generally east of I-5, south of the Edison Corridor (i.e., a series of high voltage transmission lines), west of the Santa Ana River channel and SR-57, and north of the Anaheim City Limit (which roughly follows Orangewood Avenue). The area is accessible from I-5, the SR-57, Katella Avenue, State College Boulevard, Orangewood Avenue, Lewis Street, and Anaheim Way. Additional access is provided via the Amtrak/Metrolink station adjacent to the Stadium. The local vicinity is shown in Exhibit 3-2.

3.2 SITE CHARACTERISTICS

The project area encompasses approximately 550 acres surrounding the Stadium. Existing improvements within the project area include: the Stadium and the Arrowhead Pond of Anaheim (herein referred to as the Pond), various light industrial uses, offices, hotels and supporting commercial retail uses. Similar uses surround the MLUP area. Although most of the project area is currently developed, there remains a number of vacant properties and large surface parking areas that represent underutilized land resources. While existing development can remain, the MLUP allows for new office, hotel, and retail uses to be developed within the MLUP area. The MLUP area is designated as Commercial Recreation and Business Office/Service/Industrial in the City of Anaheim General Plan (see Exhibit 3-3). As shown in Exhibit 3-4, the existing zoning for the site is Industrial Heavy (MH); Industrial Limited (ML); Commercial Heavy (CH); Commercial Limited (CL); Commercial, Office, and Professional (CO); Residential/Agricultural (Mobile Home Overlay) (RS-A-43,000 [MHP]); Residential/Agricultural (RS-A-43,000); Public Recreation (PR); and Public Recreation (Flood Plain Overlay) (PR [FP]). A more detailed discussion of surrounding land uses is provided in Section 5.1, Land Use and Related Planning Programs.

3.3 PROJECT OBJECTIVES

The purpose of the MLUP is to provide for the orderly development of the Stadium site and the surrounding area. The goals within the plan are intended to be an important basis for future land use and other policy decisions for the MLUP area. The stated goals of the MLUP are to:

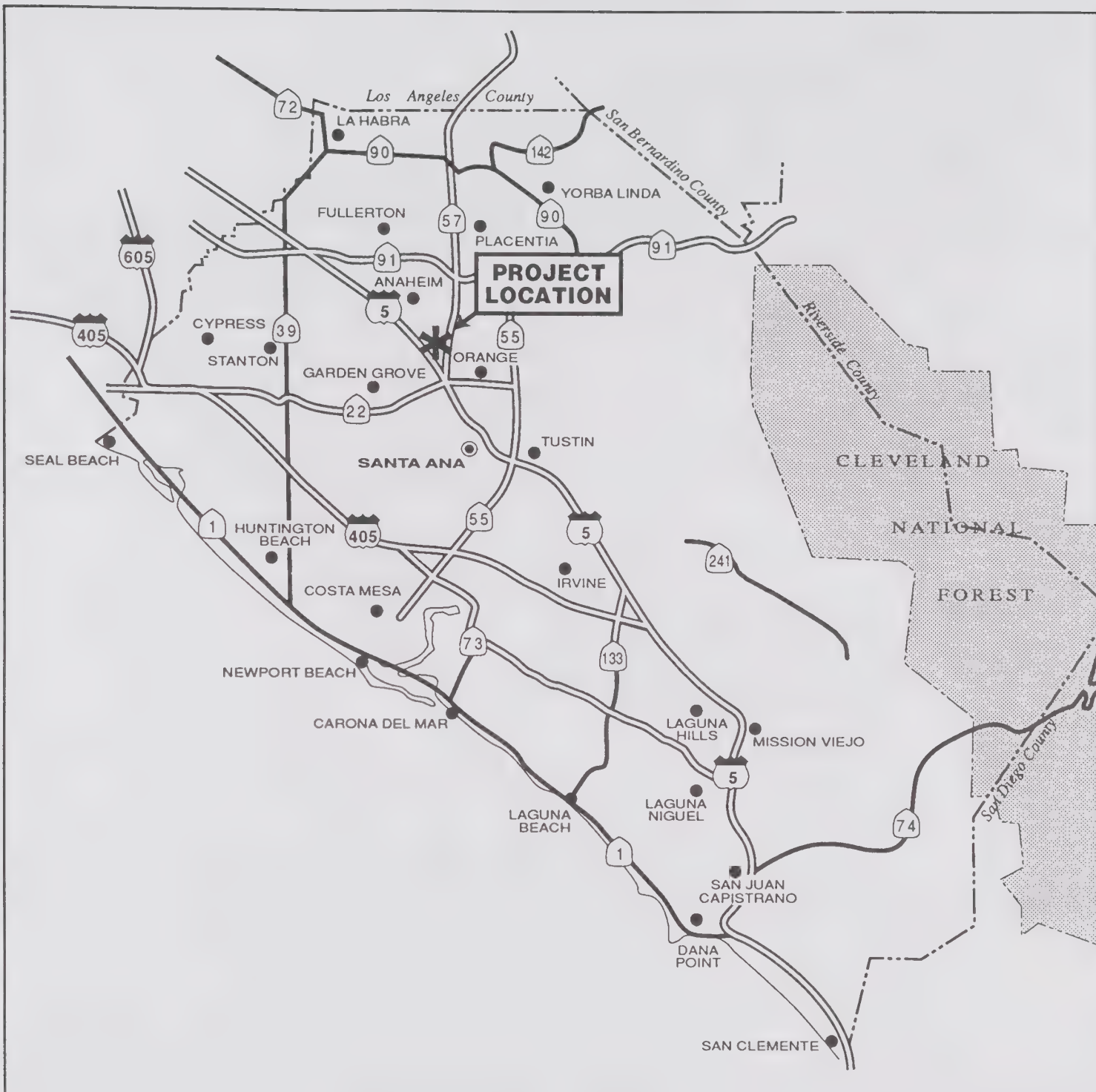
- To identify land uses for specific areas with a mixed use and sports entertainment emphasis;

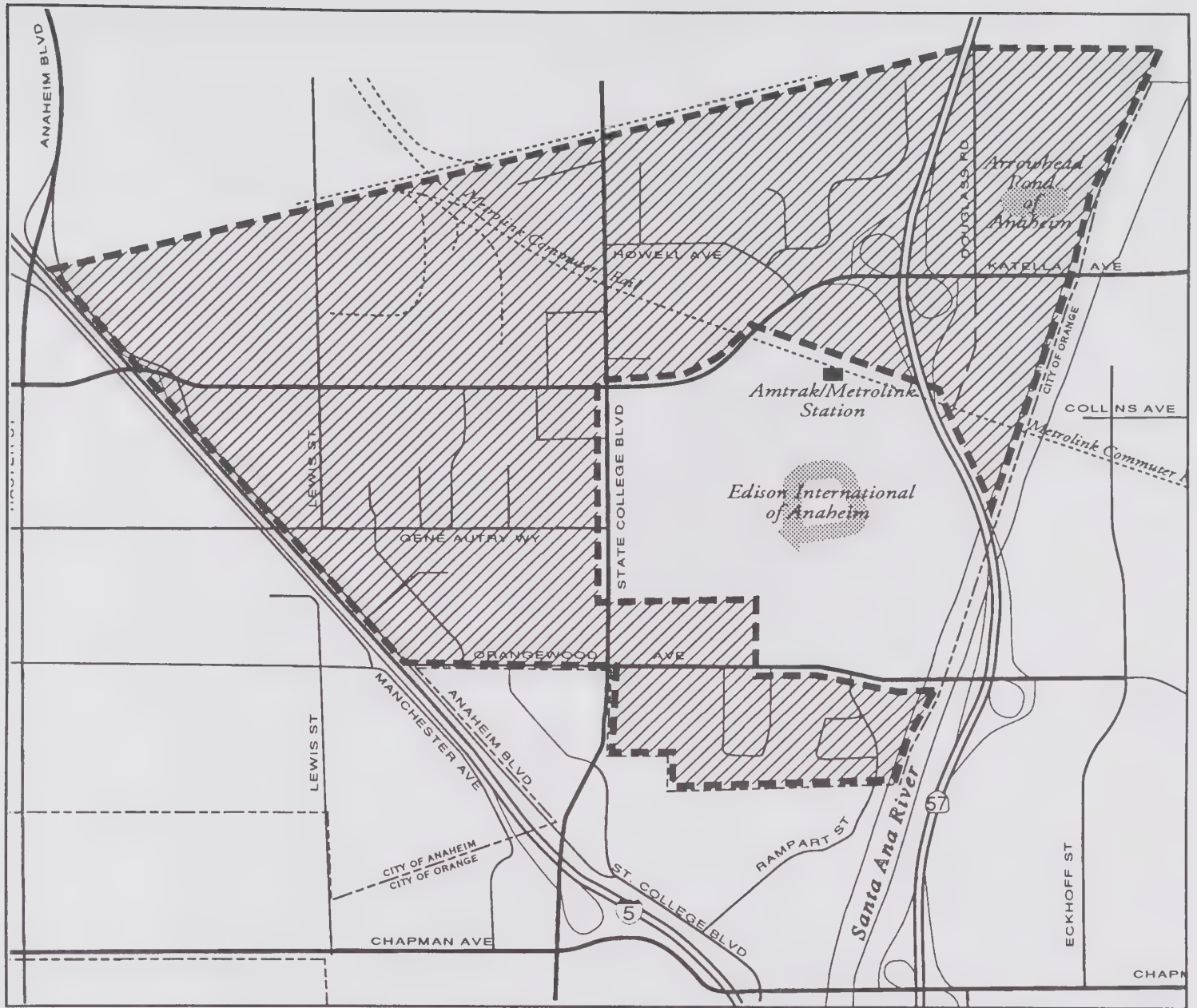
- To provide property owners with a range of land use options not available under the current zoning;
- To establish design guidelines and development standards to encourage high quality development and reinforce the sense of place in the Stadium area;
- To improve the aesthetics of the area through the development of a unifying landscape theme similar to the Anaheim Resort but unique to the Stadium area;
- To provide a linkage between the major convention, sports and entertainment areas of the City;
- To assist in the economic development of the greater Stadium area;
- To provide the City and property owners with an economic development tool by streamlining the permitting and environmental review process;
- To formulate a development plan that balances public facilities with the appropriate level of new development.

Complementing the goals of the MLUP are the Planning and Design Principles. These are intended to provide guidance for the physical development of the MLUP area. Visually, the area is uneven and lacks a positive, unified character. The scale of the current improvements (i.e., large structures and parking facilities) creates an unpleasant pedestrian environment while the proximity of premier sports and entertainment attractions generates substantial pedestrian activity. The Planning and Design Principles are thus based upon both the existing conditions within the Stadium area as well as the goals of the MLUP. The Planning and Design Principles focus on two major ideas: provision of physical and visual connections both within the MLUP area and to nearby attractions; and creation of a unique, compelling, grand-scaled image which reflects the character of future uses and provides an impetus for visitors to come to the City of Anaheim and the MLUP area.

Four general goals will guide implementation of the MLUP: 1) allow existing industrial and office uses to remain; 2) encourage new sports entertainment uses, including the City-owned Stadium property; 3) orient of the MLUP to corridor districts; 4) and intensify land uses along the Katella Corridor District. The primary tool to achieve these goals will be the Zoning Overlay which will be discussed in greater detail in the following section.

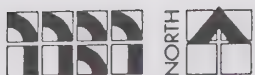
The City of Anaheim has also established development objectives relative to the proposed project that are intended to set the framework and criteria for development of the site and surrounding area. The City's overall objective for the project is to establish a plan for the economic development and enhancement of the MLUP area. Following are the City's specific objectives, which have been used to guide the formulation and characteristics of the MLUP.





LEGEND

 Project Site Location



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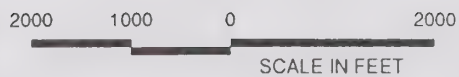
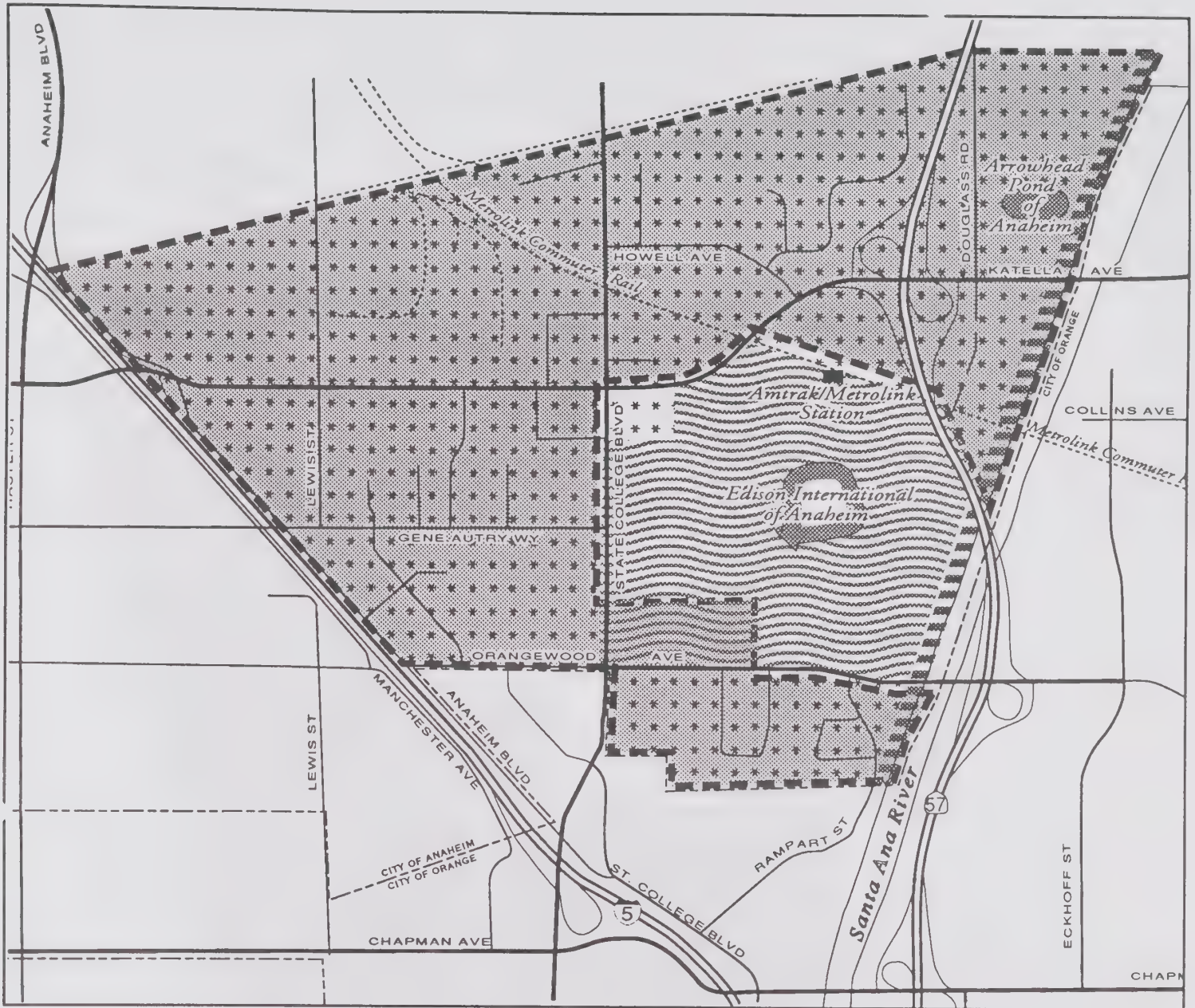


Exhibit 3-2 Project Vicinity Map

ANAHEIM STADIUM AREA MASTER LAND USE PLAN EIR



SOURCE: City of Anaheim

LEGEND

-  Project Site Location
-  Business Office/Service/Industrial
-  Commercial Recreation
-  General Open Space/Riding and Hiking Trail

- To identify alternate land uses for specific areas with a mixed use and sports entertainment emphasis.
- To provide owners with a range of land use options not available under the current zoning.
- To establish design guidelines and development standards to encourage high quality development and reinforce the sense of place in the MLUP.
- To improve the aesthetics of the area through the development of a unifying landscape theme similar to the Anaheim Resort but unique to the MLUP.
- To provide a linkage between the major convention, sports, and entertainment areas of the City.
- To assist in the economic development of the greater MLUP.
- To provide the City and property owners with an economic development tool by streamlining the permitting and environmental review process.
- To formulate a development plan that balances public facilities with the appropriate level of new development.

3.4 PROJECT CHARACTERISTICS

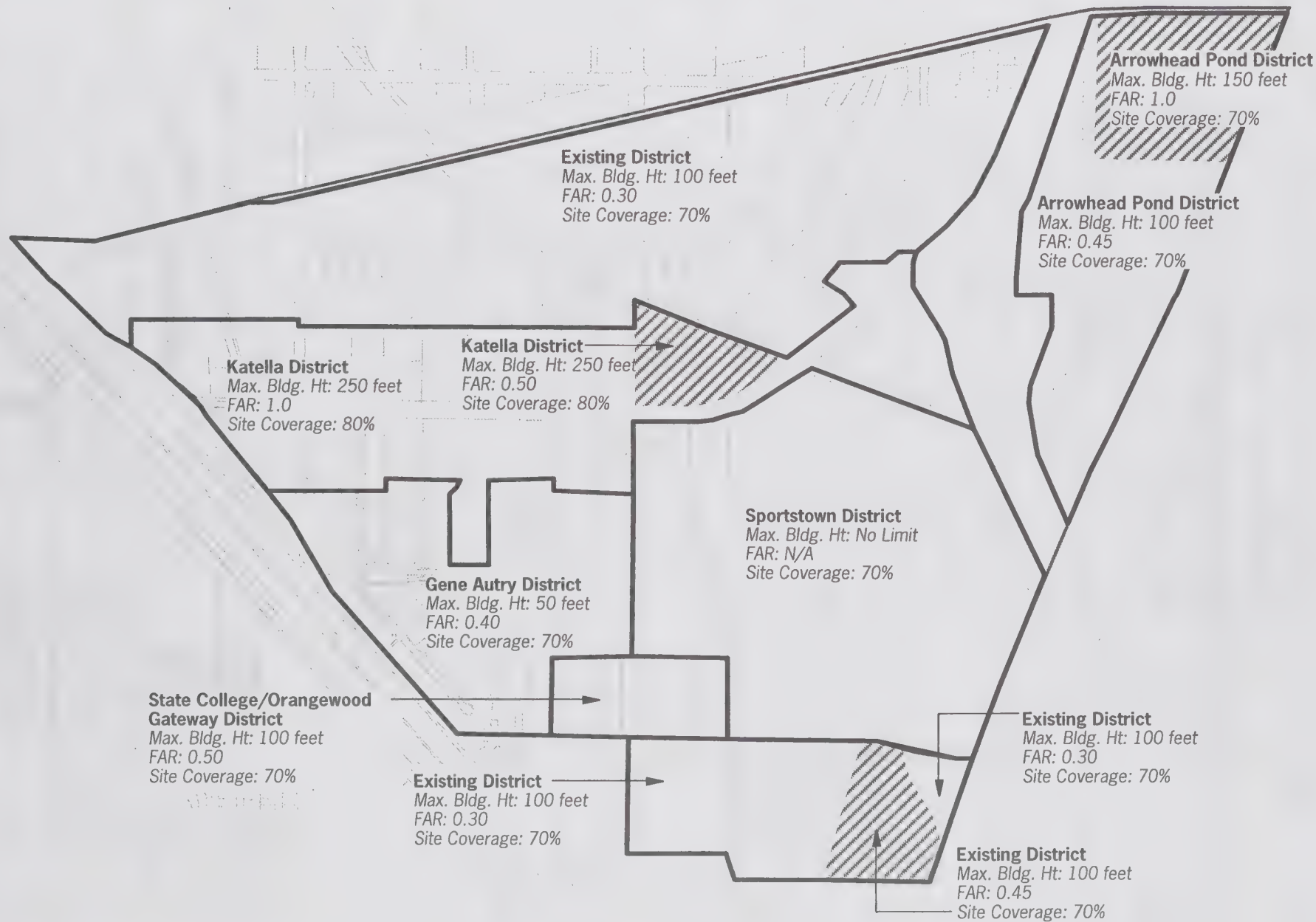
The proposed project would be implemented through the use of a Zoning Overlay for the MLUP area. The Zoning Overlay would permit the regulations and standards of the underlying zone (current zoning) to be preserved, while adding special provisions, which may apply when a property is developed in accordance with uses permitted within each district. The intent of using the Zoning Overlay is to permit the current uses to continue or expand within the provisions of existing zoning, while providing those who may want to develop sports, entertainment, retail and office uses with standards appropriate to those uses, including increase land use intensity. The Zoning Overlay will also provide a means to adopt design guidelines for specific areas of the MLUP area. Under the proposed Zoning Overlay, the MLUP would divide the project site into six districts and allow for a total development of approximately 13.3 msf. As shown in Table 3-1, approximately 10.5 msf exists or is under construction, as part of the Sportstown Anaheim project (Sportstown District) or in the entitlement stage within the Arrowhead Pond District in the MLUP area. Implementation of the MLUP, under the proposed project, would allow for 2.8 msf of new development within the project area under the proposed Zoning Overlay. As shown in Table 3-2, this would include a net loss of industrial space of 491,303 sf, and increases of 1,871,285 sf of new office space, 452,026 sf of new retail space, and 991,603 sf of new hotel space. Exhibit 3-5 depicts the maximum building height, floor area ratio, and site coverage for these uses within each of the districts. Section 3.5, Project Components, provides for a more detailed discussion of the project as it relates to the individual districts.

**TABLE 3-1
MAXIMUM ALLOWABLE DEVELOPMENT BY MLUP DISTRICT**

DISTRICT	USE	EXISTING SQ. FT.	PROPOSED PROJECT SQ. FT.	TOTAL ALLOW. SQ. FT
Existing District	Industrial		126,862	
		3,358,374	126,862	3,485,236
Gene Autry District	Office		116,141	
	Retail		116,140	
		806,538	232,281	1,038,819
Arrowhead Pond District	Office		356,484	
	Retail		71,297	
	Hotels		166,359	
		1,101,215 ^a	594,140	1,695,355
Katella Corridor District	Industrial		-216,210	
	Office		1,220,322	
	Retail		248,584	
	Hotels		790,949	
		2,934,392	2,043,645	4,978,037
Gateway District	Industrial		-401,955	
	Office		178,338	
	Retail		16,005	
	Hotels		34,295	
		537,043	-173,317	363,726
Sportstown District	Entertainment	0	0	1,700,000
	Retail			
TOTAL			2,823,611	13,261,173
^a Includes a 982,000 square foot mixed use center (Arena Corporate Center) currently being entitled under a separate environmental document.				
Source: Spectrum Group, July 1998				

**TABLE 3-2
PROJECT COMPONENTS**

USE	SQUARE FEET
Industrial	-491,303
Office	1,871,285
Retail	452,026



SOURCE: SWA Group.



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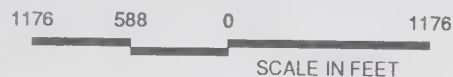


Exhibit 3-5 Development Intensity Plan

ANAHEIM STADIUM AREA MASTER LAND USE PLAN EIR

TABLE 3-2 (continued)

USE	SQUARE FEET
Hotel	991,603
TOTAL	2,823,611
Source: Spectrum Group, July 1998	

3.5 THE ANAHEIM STADIUM AREA MASTER LAND USE PLAN PROJECT COMPONENTS

The project entails the implementation of a comprehensive development plan called the Anaheim Stadium Area MLUP. The plan which covers the existing stadium site and the approximate 550-acre project area surrounding the Stadium provides a comprehensive, long-term strategy for the development of approximately 13.3 msf of office, retail, hotel, and industrial space. These new uses under the MLUP would be developed in and around the existing stadium site. The MLUP also allows existing businesses in the project area to continue in their present form, while providing the regulatory framework for individual properties to take advantage of the new uses and amenities envisioned by the MLUP under the proposed Zoning Overlay.

Currently the MLUP area is visually uneven and lacks a positive, unified character. The large area lacks a unifying visual scale of existing improvements (e.g., vast parking areas) serves to create an unpleasant pedestrian environment. The objective of the MLUP is to take advantage of existing and proposed destination-type uses such as the Stadium, the Pond, and Sportstown Anaheim while facilitating the development of unique, integrated, pedestrian oriented, sports entertainment urban attractions. Implementation of the MLUP will also involve improvements to the public right-of-way including street widening and extensions, landscape enhancements to provide a visual/aesthetic link to the Anaheim Resort, as well as design guidelines which will facilitate a unified, civic-scaled public landscape surrounding the Stadium site.

The MLUP is intended to provide guidance and consistency for future development within the MLUP boundaries. Although adoption of the MLUP would not directly result in development impacts, future implementation (i.e., infrastructure development and individual development proposals being guided and directed by the MLUP) could result in impacts from development within the project area. Potential environmental impacts of this nature (i.e., impacts resulting from the implementation of a plan or program) constitute a "Project" as defined by CEQA guidelines. When future developments are proposed within the boundaries of the MLUP, the City of Anaheim will examine developments in light of this EIR to determine what additional environmental documentation must be prepared. Developments that do not require additional discretionary review will not be subject to any additional environmental documentation. However, the property owner/developer will be required to submit documentation

substantiating said development is allowed and in conformance with the MLUP, and that their environmental effects are within the parameters analyzed within this EIR.

It is the intent of the City, through adoption of the MLUP, to provide a comprehensive, long-term plan that supports development of visitor-serving uses, while addressing the potential impacts of this type of development within the context of the area. To achieve this, the proposed MLUP establishes goals, objectives, and policies for the planning area, as well as permitted land uses, development densities, standards, and design guidelines for the systematic implementation of the MLUP for the area. Adoption of the MLUP will reduce the development potential of the project area from approximately 22 msf currently allowed under the General Plan, to approximately 13.3 msf.

3.5.1 ORGANIZATION OF THE MLUP

The MLUP is divided into six chapters. Chapter 1, Executive Summary, includes a brief overview of the proposed plan. Chapter 2, Project Description, describes the existing conditions of the MLUP area and the general improvements. Chapter 4, Urban Design Plan, describes the general goals, policies, and design principles which will apply to the future development of the MLUP area. Chapter 5, District Plans, describes the details of the MLUP as they apply to specific areas. Chapter 6, Sports Entertainment Overlay (SE) Overlay Zone, establishes the detailed development standards and regulations which will become part of the Anaheim Municipal Code and which will serve as the zoning for the MLUP.

3.5.2 RELATIONSHIP TO THE CITY PLANNING DOCUMENTS

Where necessary, the Anaheim General Plan will be amended to accommodate changes in the future development of the MLUP area. The Land Use and Circulation Elements will be amended to provide sports entertainment uses and circulation improvements. Several other planning efforts of the City of Anaheim and other governmental agencies were also considered in the development of the MLUP:

- The I-5 North Corridor Aesthetic Theme and Guidelines;
- Katella Smart Street Implementation Plan;
- Army Corps of Engineer's Santa Ana River Mainstream Project;
- Master Plan of the Drainage for the South Central Area;
- South Central Area Sewer Deficiency Study;
- The County's Commuter Bikeway Strategic Plan;
- Sportstown Anaheim Area Development Plan; and
- City of Anaheim Underground Conversion Program.

3.5.3 MLUP ILLUSTRATIVE PLAN

As shown in Exhibit 3-6, the MLUP Illustrative Plan shows the future character of the proposed project once development has proceeded. It is an artistic impression of how the area may eventually look, especially in those areas where development is likely in the near future. Accordingly, the emphasis of the content is on the following changes, including:

- Development of a new sports entertainment destination, known as Sportstown Anaheim, adjacent to the Stadium.
- Widening of I-5, which has already commenced.
- Widening of Katella Avenue between I-5 and SR-57 as part of the County-wide Smart Street program.
- Eventual implementation of district-wide streetscape enhancements intended to be compatible with other City street enhancement programs, particularly those within the nearby Anaheim Resort and Downtown Anaheim.

3.5.4 DISTRICT PLANS

The MLUP divides the project area into six districts (see Exhibit 3-7). These include: the Existing District, the Gene Autry District, through which millions of visitors will arrive in the MLUP area each year; the Arrowhead Pond District, where the Arrowhead Pond is located; the Gateway District; the Katella Corridor District, a District that includes special landscape and setback requirements supplemented by enhanced density and building height requirements; and the Sportstown District, a sports-entertainment district located on the City-owned Stadium property. The following is a detailed discussion of the individual districts and their types of uses (existing and proposed) and square footages to be allowed under the MLUP.

Gene Autry District

The Gene Autry District includes the area between I-5 and the main entry to the Stadium and the Sportstown District (see Exhibit 3-7). All parcels which have frontage on Gene Autry Way between the I-5 and State College Boulevard are included within the Gene Autry District.

Permitted land uses within the Gene Autry District include the full range of uses permitted within the MLUP area. It is anticipated that the District will be particularly attractive to restaurants, retail entertainment, and office uses. As shown on Table 3-1, implementation of the proposed project would allow for the development of 116,141 sf of office space and 116,140 sf of retail space. While Gene Autry Way is presently used for local circulation, future use is anticipated to increase substantially with the opening of the HOV lane access to I-5, and the planned extensions over I-5. Various design

features have been incorporated into the MLUP to enhance the character of the street. These include provisions to encourage pedestrian access and activity, as well as aesthetic features along Gene Autry Way, such as landscaping and open medians to enhance views of the Stadium.

The Arrowhead Pond District

The Arrowhead Pond District includes the area to the east of the SR-57 and the City boundary (see Exhibit 3-7). The District includes the Pond and its associated parking areas. All parcels to the east of SR-57 are included within the District. The County of Orange property adjacent to the Santa Ana River south of Katella Avenue will be included in this District when it is annexed into the City.

It is likely the area will be particularly attractive to restaurants, retail entertainment and office uses. As shown in Table 3-1, implementation of the proposed project would allow for the development of 356,484 sf of office, 71,297 sf of retail, and 166,359 sf of hotel space within the Arrowhead Pond District.

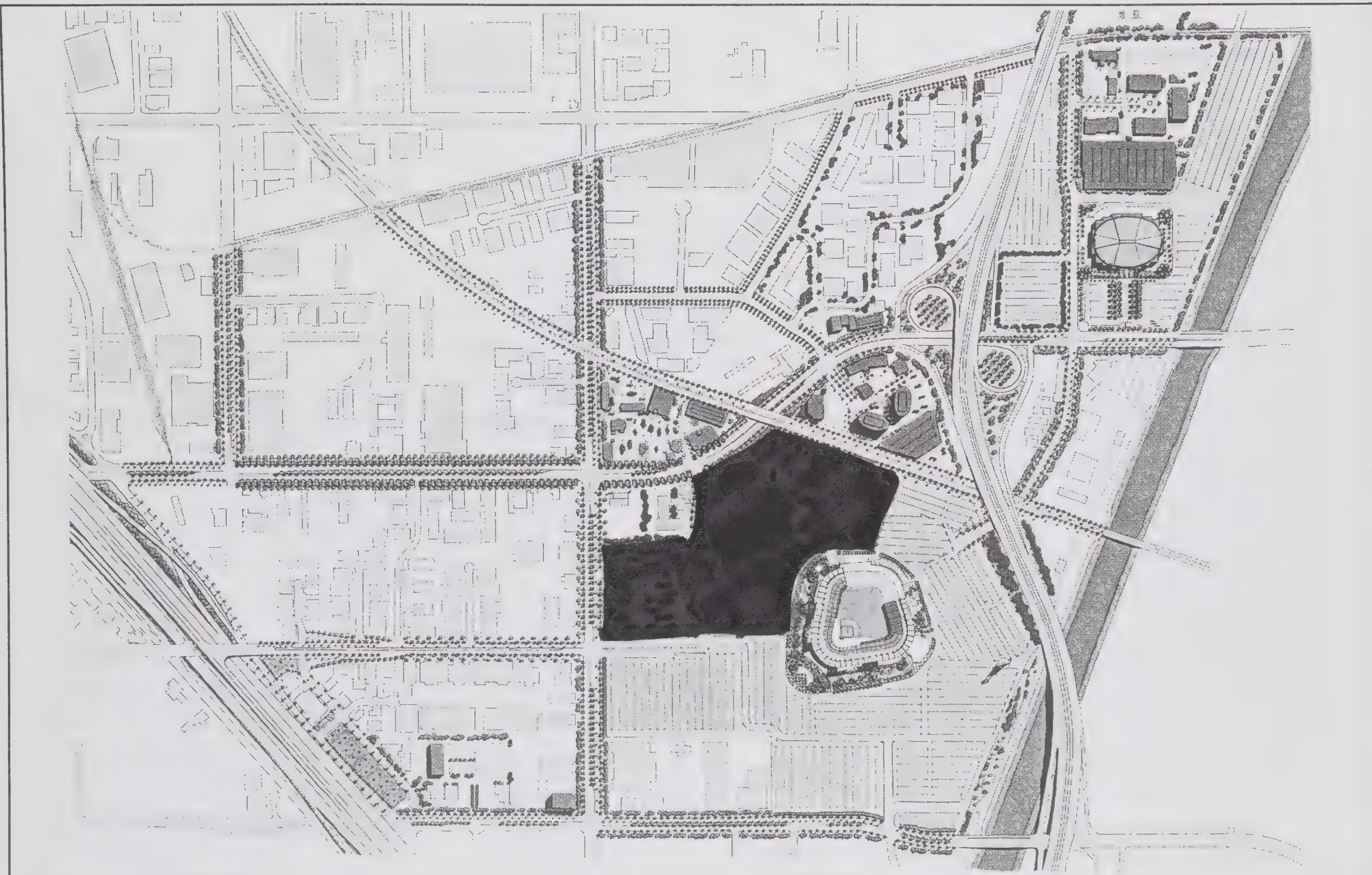
Gateway District

The Gateway District includes properties located on the north side of the State College Boulevard/Orangewood Avenue intersection at the southern edge of the MLUP area (see Exhibit 3-7). In spite of their favorable orientation to the freeway and excellent visibility, the odd shape of some of the parcels, and their limited access, presents constraints to future development. The properties with the severest limitation are located south of Gene Autry Way between Santa Cruz Street and Anaheim Way. The off-ramp configuration prevents easy access to these parcels, and circulation is limited due to the one-way Anaheim Way. These parcels do not provide ample land to consider them for the types of large-scale, high value uses which might otherwise be appropriate in this location. Inappropriate use of this land could detract from the value of the west-facing properties on Santa Cruz Street, which are large enough, deep enough with sufficient access to eventually take advantage of the freeway visibility.

North of Gene Autry Way, the configuration of the parcels and their access is much better than south of Gene Autry Way, and they present excellent redevelopment opportunities. The uses could be freeway-oriented retail or entertainment uses or industrial research and development uses. As shown on Table 3-1, implementation of the proposed project would allow for the development of 178,338 sf

Katella Corridor District

Located between I-5 and State College Boulevard, the Katella Corridor District is intended to be the “Grand Avenue” of the MLUP area (see Exhibit 3-7). As a major visual and physical connector



SOURCE: SWA Group.

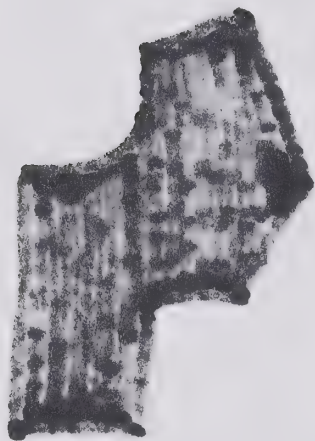


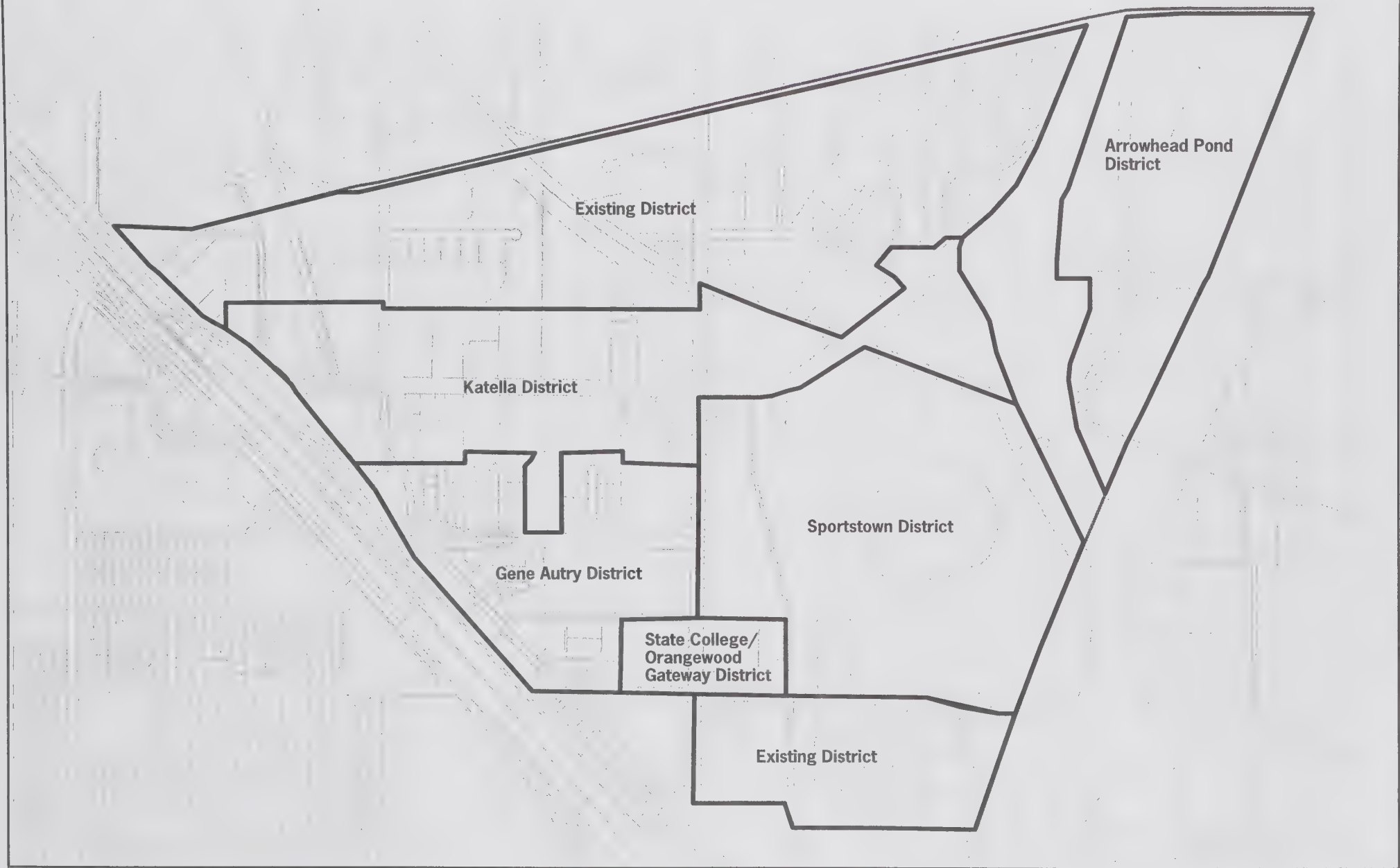
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Exhibit 3-6 MLUP Illustrative Plan

ANAHEIM STADIUM AREA MASTER LAND USE PLAN EIR





SOURCE: SWA Group.



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Exhibit 3-7 District Boundaries

between the Anaheim Resort to the west and the Stadium and Pond to the east, it is envisioned as a palm tree lined boulevard with a special pedestrian environment and the focus of the greatest building intensity in the MLUP area. All properties with frontage on Katella Avenue between I-5 and State College Boulevard are within the Katella Corridor District. Other properties may be added to the District provided they are part of an integrated project with an identity consistent with the requirements of the District.

In addition to the sports and entertainment retail uses generally permitted throughout the MLUP area, this District will be especially appropriate for office uses, ground-floor restaurants with outdoor dining, hotels, and support facilities. Although not part of this project, planned improvements related to the Katella Smart Street program along with the MLUP's access provisions/requirements will improve circulation along Katella Avenue. In addition, the MLUP creates special pedestrian zones through design criteria applicable to properties within the district. As shown on Table 3-1, the proposed project would allow the development of 1,220,322 sf of office, 248,584 sf of retail, 790,949 sf of hotel, and a reduction of 216,210 sf of industrial space within the Katella Corridor District. of office, 16,005 sf of retail, 34,295 sf of hotel and a decrease of 401,955 sf of industrial space.

Sportstown District

Located near the Stadium, Sportstown is one of the central features of the Stadium Area Master Plan. Conceived as an entertainment/retail center with a sports-related emphasis, City of Anaheim EIR No. 320 approved development in 1996 of a renovated "Anaheim Stadium" (45,000 new seats), 750,000 sf of urban entertainment/retail, 500 hotel rooms, 150,000 sf of exhibition space, 250,000 sf of office space, and 15,570 on-site and 8,000 off-site parking spaces. The Sportstown District is bordered on the north by Katella Avenue and the railroad right-of-way, on the east by the SR-57 and Santa Ana River channel, on the south by Orangewood Avenue (excluding the privately-owned parcels), and on the west by State College Boulevard (see Exhibit 3-7).

The Sportstown District is intended for sports, entertainment, office, retail and visitor serving uses. Permitted uses include a new sports stadium, exhibition facilities, hotels, restaurants, family-oriented entertainment venues, offices, and other similar uses. Internal pedestrian connections between the major entertainment uses and the transit systems will serve to improve the function and appearance of the District.

Existing District

The Existing District includes properties located in the northern portion of the project site extending west from SR-57 and the southeastern portion of the site adjacent to the Santa Ana River (see Exhibit 3-7). Under the MLUP, land uses within the district will primarily remain in their current state which

includes an existing 2,855,633 sf of industrial, 312,521 sf of office, and 190,220 sf of retail space. However, the MLUP does propose an additional 126,862 sf of industrial space within the Existing District.

3.5.5 URBAN DESIGN

The MLUP includes an Urban Design section describing the landscape and identity elements of the MLUP.

Landscape Plan

The primary goal of the Landscape Master Plan (LMP) is to create a memorable, unified, and civic-scaled landscape theme similar to and complementary with the Anaheim Resort. As shown in Exhibit 3-8, Landscape Concept Plan, the LMP proposes extensive landscape improvements along I-5, major streets and selected gateways within the Stadium Area. Further, as properties redevelop, the front landscape setbacks will be planted with materials complementary to the public right-of-way.

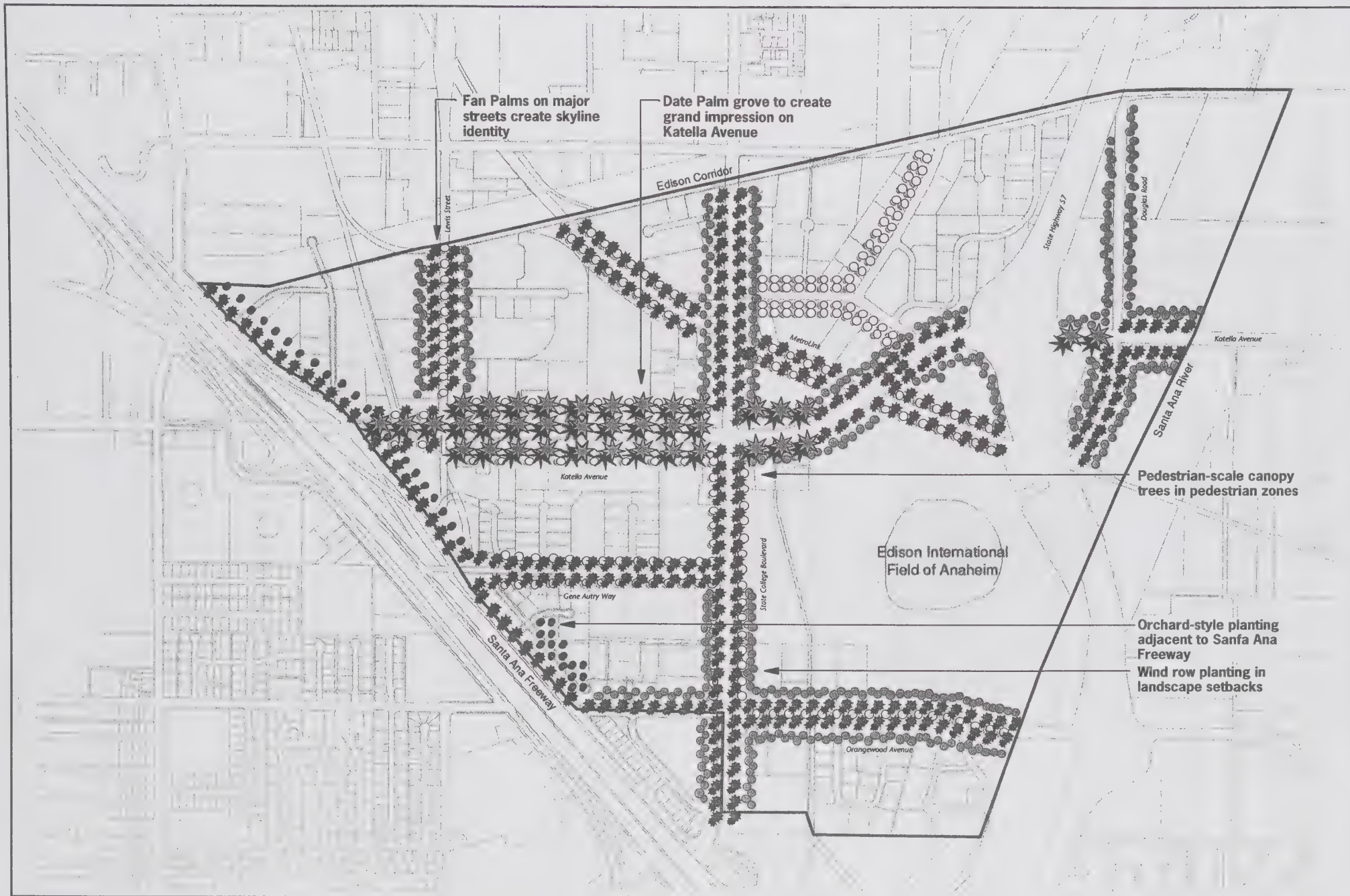
The basic landscape design concepts inherent in the landscape theme are to:

- *Create a Skyline Identity* to take advantage of the excellent freeway visibility through the use of Fan Palms and similar-scaled palms as a means to create visual interest along major streets in the MLUP area;
- *Provide Pedestrian-Scaled Sidewalks* at strategic locations near Edison Field and the Arrowhead Pond to accommodate the pedestrian activity associated with events at these venues. Smaller-scaled canopy trees will also be used to enhance the pedestrian experience;
- *Enhance the Special Environment on Katella Avenue* in recognition of its importance as the physical connector between the Anaheim Resort and the Stadium Area; and
- *Maintain the Agricultural Landscape Traditions of Anaheim's Past* through the use of wind row and orchard plantings to provide scale and geometry to major streets.

Identity Plan

The District Identity Plan describes the signage and environmental graphic components which help establish the Stadium Area's image and character. The Identity Plan components include gateways, icons, signs, banners, site furnishings and lighting. The basic goals of the Identity Plan are to:

- *Establish a unique visual identity with a hierarchy of identity elements which reinforces the land use, circulation, open space and landscape components of the MLUP;*



SOURCE: SWA Group.



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Exhibit 3-8 Landscape Concept Plan

ANAHEIM STADIUM AREA MASTER LAND USE PLAN EIR

- *Create a design vocabulary which celebrates the unique combination of sports and entertainment imagery which characterizes the primary uses in the MLUP area; and*
- *Define those areas where special identity treatments are important to establishing identity within the individual MLUP districts.*

As shown in Exhibit 3-9, the Identity Plan specifies the location of the primary gateways: The Santa Ana Freeway Gateway, Orange Freeway/Katella Avenue Gateway, the Amtrak/MetroLink Gateway, and the secondary Sportstown Gateways. These gateways are described in detail below.

Santa Ana Freeway Gateway – This gateway is envisioned to include a large open area adjacent to I-5, north of Orangewood Avenue. This gateway will utilize remnant freeway parcels that are too narrow for development. North of Gene Autry Way, this gateway will consist of a widened setback area adjacent to Anaheim Way. The treatment of this gateway may consist of large-scale Fan Palms together with smaller orchard plantings and tower elements.

Orange Freeway/Katella Avenue Gateway – This gateway will mark the primary entry point to Sportstown Anaheim and the Stadium Area. Gateway elements proposed here include a large-scale Sportstown tower icon, Sportstown banners within the public right-of-way and either Fan of Date Palms to mark the entrance to this part of the MLUP area.

Amtrak/MetroLink Gateway – This gateway is intended to provide a dramatic entry into the MLUP area for visitors arriving by train. The proposed treatment includes installation of Fan Palms, orchard plantings, and other thematic elements such as towers, banners and other devices to portray a sense of arrival. This area will become even more important as one of the planned stations for OCTA's Urban Rail project.

Sportstown Secondary Gateways – The boundaries of the Stadium property represent a significant entry point to the Sportstown District and the Sportstown Anaheim project. These secondary gateways will be located at the major entry points to the Stadium property. The specific gateway locations include the Gene Autry and Katella entrances to the Stadium property, and potentially the Douglass Road and Orangewood Avenue entry points as well. Thematic elements could include landscaping, freestanding elements such as towers, arches and/or features unique to the Sportstown District.

3.6 INTENDED USE OF THIS EIR, RESPONSIBLE AGENCIES, AND APPROVALS NEEDED

The EIR is being prepared by the City of Anaheim to assess the potential environmental impacts that may arise in connection with action related to future implementation of the Anaheim Stadium Area MLUP. The City of Anaheim is the lead agency for the project and has discretionary authority over

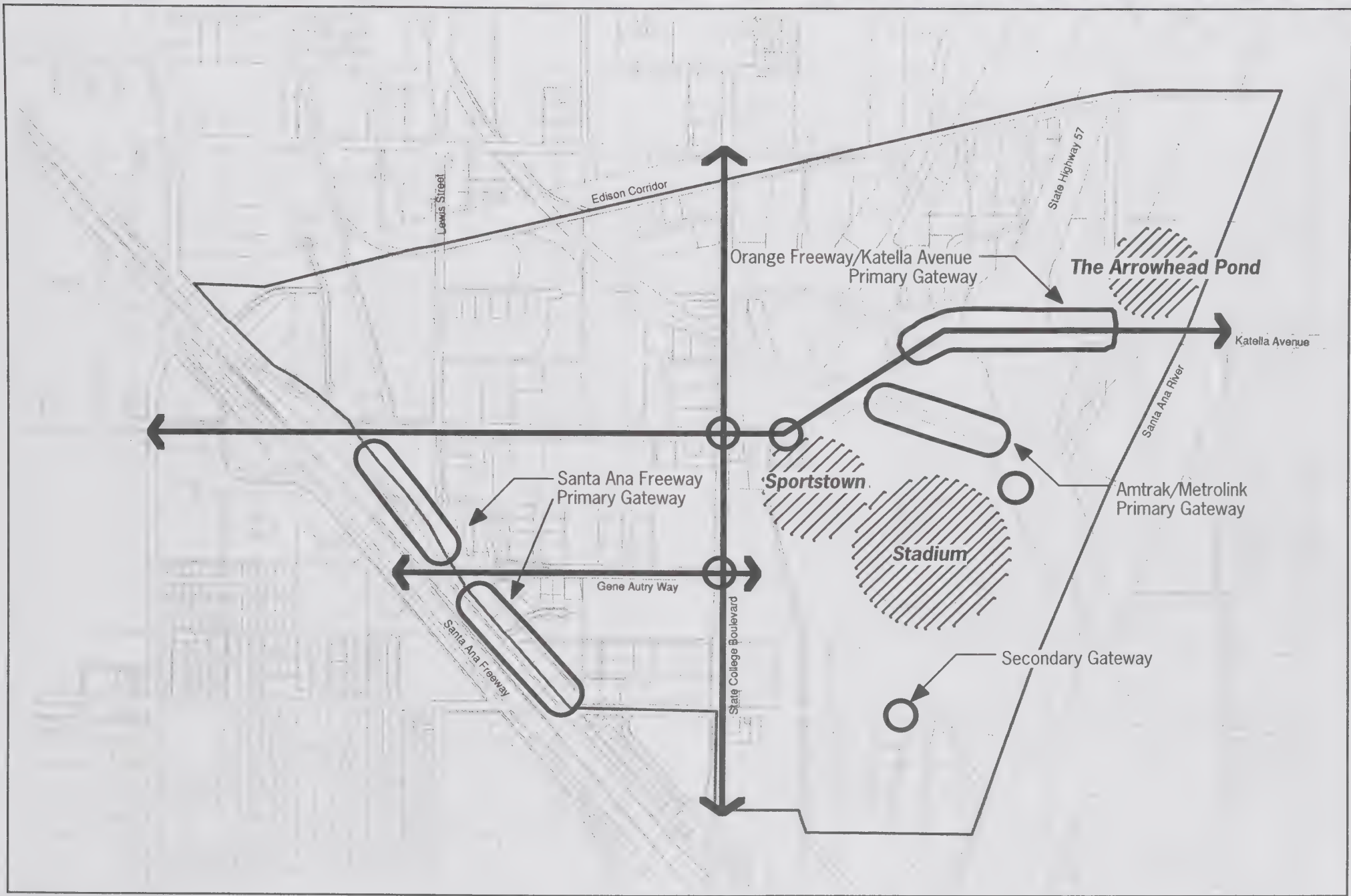
the project and project approvals. It is the intent of the City to permit all public infrastructure improvements and all future developments that are within the timeframes and parameters established and analyzed in sufficient detail within the framework of this EIR to proceed without further environmental analysis. In addition to the currently proposed MLUP, other concurrent and future approvals by the City may be required for the implementation of the MLUP. Such discretionary actions may include implementation of a zoning overlay, amendments to the General Plan, the processing of conditional use permits, variances and subdivision maps. Other actions could include infrastructure financing and maintenance programs, and other actions necessary to implement the project as identified below under the section “Other Discretionary and Ministerial Actions.”

3.7 OTHER DISCRETIONARY AND MINISTERIAL ACTIONS

The project may also require the following approvals by the City of Anaheim: financing mechanisms/agreements; abandonment of streets or subsurface rights; building permits; demolition permits; grading permits; encroachment permits; property acquisition (which may involve the exercise of eminent domain for roadway and intersection improvements, landscape easements, and other public infrastructure); and other actions related to the implementation of the proposed project.

Other agencies with discretionary authority over some aspect of the project are defined in CEQA as responsible agencies (Section 15381 of the State CEQA Guidelines). Such agencies may also use this EIR in their consideration of the project. These agencies include, but are not limited to:

- California Department of Transportation (Caltrans)
- Orange County Planning and Development Services Department
- Orange County Health Department
- Orange County Transportation Authority
- Regional Water Quality Control Board
- South Coast Air Quality Management District
- Southern California Association of Governments



SOURCE: SWA Group.



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Exhibit 3-9

Design Framework Diagram

ANAHEIM STADIUM AREA MASTER LAND USE PLAN EIR

SECTION 4

GENERAL DESCRIPTION OF ENVIRONMENTAL SETTING

4.1 OVERVIEW OF ENVIRONMENTAL SETTING

The proposed MLUP project area is within the City of Anaheim, approximately 35 miles southeast of downtown Los Angeles and directly adjacent to the City of Orange to the east, in north Orange County. The regional location of the project is displayed in Exhibit 3-1. The project site is located generally northeast of I-5, south of the Edison Corridor, west of the Santa Ana River channel, and north of the Anaheim City Limit (which roughly follows Orangewood Avenue). The area is accessible from I-5, SR-57, Katella Avenue, State College Boulevard, Orangewood Avenue, Lewis Street, and Anaheim Way. Additional access is provided via the Amtrak/MetroLink station adjacent to the Stadium.

The project site encompasses an area of approximately 550-acres surrounding the Stadium, and includes the Pond and land uses such as light industrial buildings, several industrial parks, distribution facilities, offices, hotels, and supporting retail uses with similar types of land uses surrounding the project site. An underground storm-drain channel extends through the western portion of the project site in a north/south direction. Residential uses are located outside the project area to the south in the City of Orange.

From a geophysical perspective, the MLUP area is located within the Peninsular Range Province that extends from Los Angeles County to southern Baja California, Mexico. The project site is located near the southeasterly margin of the Central Block, a portion of the Los Angeles Basin. The ground surface of the Central Block, in particular the project site, is a relatively flat surface with a shallow 16-foot-per-mile slope (250:1) to the southwest. This surface was formed by stream deposition meandering back and forth, creating a broad alluvial plain. The alluvial deposits were derived predominantly from the Santa Ana River. The Newport-Inglewood Fault trends northwest-southeast, approximately 9 miles south of the site. This fault zone represents the western edge of the Central Block and is characterized by several low, well-rounded hills along the fault trace. The northern margin of the Central Block is represented by the Whittier Fault, approximately 9 miles north of the site at the base of the Puente Hills.

With respect to air quality, the project site is located within the South Coast Air Basin, in which the existing ambient air quality exceeds state and federal standards for ozone, carbon monoxide, PM10, and nitrogen dioxide. Notable sources of pollutant emissions in proximity to the project site include vehicular traffic on major freeways such as I-5 and SR-57 as well as local roadways such as Katella Avenue, State College Boulevard, and Orangewood Avenue.

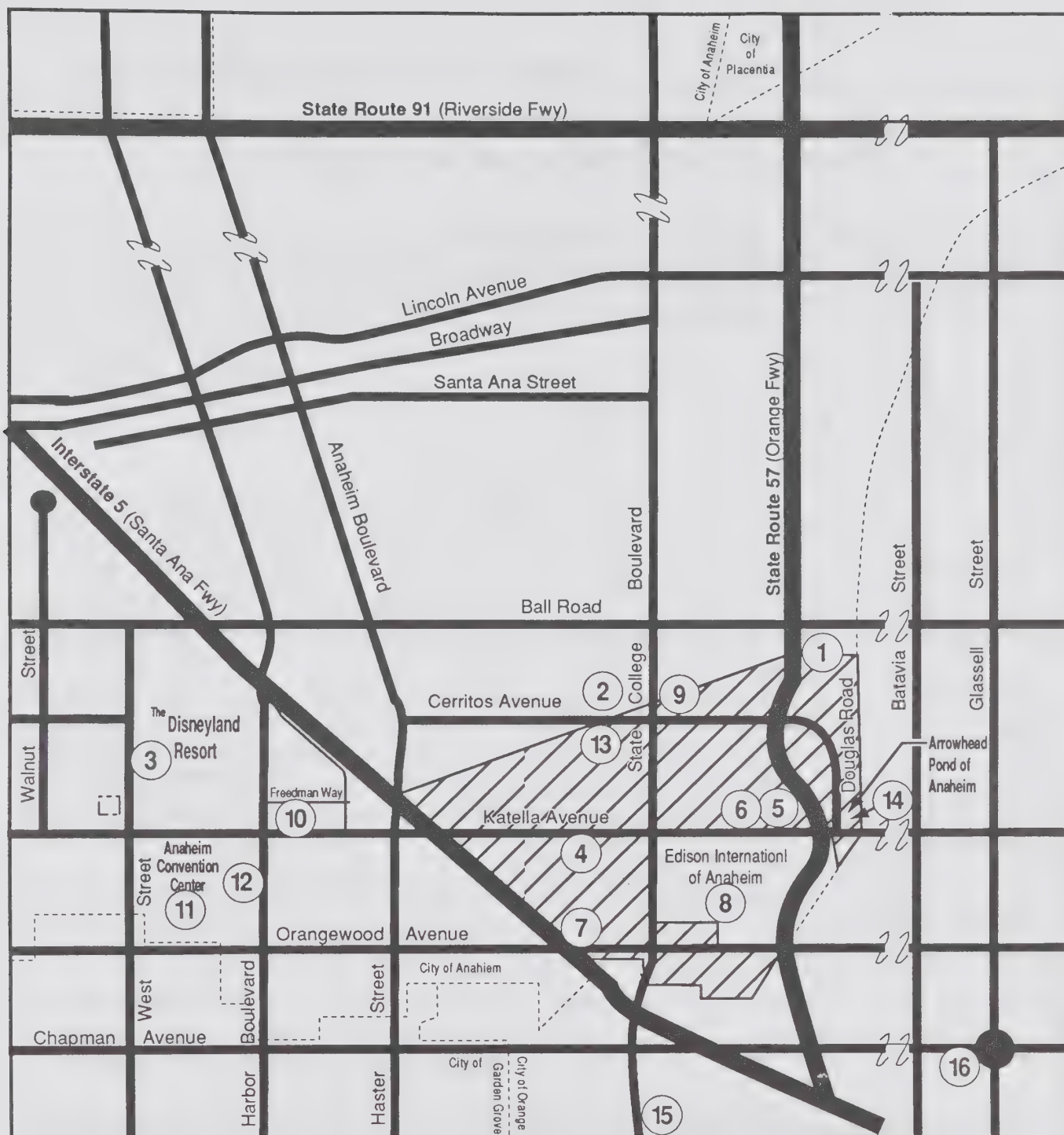
The existing acoustical setting at the site is influenced by roadway noise along major roadways, including I-5, SR-57, Katella Avenue, State College Boulevard, and Orangewood Avenue. In addition, intermittent noise from sporting events and exhibition activities influence the acoustical setting of the project area.

4.2 RELATED PROJECTS ASSUMED FOR CUMULATIVE IMPACT ANALYSIS

Section 15130 of the CEQA Guidelines requires the consideration of cumulative impacts within an EIR. Cumulative impacts are defined as two or more individual effects which, when considered together, are considerable or which compound or increase other environmental effects. The individual effects may be changes resulting from a single project or a number of separate projects. The cumulative impact from several projects is the change in the environment which results from the project when added to other closely related future projects. In identifying projects which may contribute to cumulative impacts, the CEQA Guidelines allow the use of either a specific list of past, present, and reasonably anticipated future projects, or a summary of projections contained in an adopted General Plan or related planning document which is designed to evaluate regional or areawide conditions. The cumulative analysis discussed in Sections 5.1 through 5.11 is primarily based on a number of future related projects or reasonably anticipated projects producing related or cumulative impacts. The master list of related projects and their locations is presented in Table 4-1, List of Projects Assumed for Cumulative Impacts, and Exhibit 4-1, Related Projects Location Map, respectively.

For the analysis of certain impacts, it is appropriate to consider regional planning documents or studies, which provide projections regarding future development, rather than specific project proposals that are under review. The cited plans in this section are incorporated by reference into this document. For example, regional traffic projections are considered for cumulative traffic impacts, as well as local traffic projections. The specific sources of the planning projections are described below under the relevant environmental category.

In addition to the related projects listed in Table 4-1, several related transportation projects are considered in this analysis, including the Katella Avenue Smart Street, Harbor Boulevard Smart Street, and I-5 improvements. These improvements are described in Section 5.2, Transportation and Circulation.



SOURCE: City of Anaheim, City of Orange, and Orange County Sheriff Department, September 1998.

LEGEND



Project Site



Related Project Location



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Exhibit 4-1 Related Projects Location Map

ANAHEIM STADIUM AREA MASTER LAND USE PLAN EIR

TABLE 4-1
LIST OF PROJECTS ASSUMED FOR CUMULATIVE IMPACTS

Project Name	Land Use Types			
	Office (sq. ft.)	Retail (sq. ft.)	Hotel (rooms)	Misc. (sq. ft.)
Approved Projects				
1. Anaheim Auto Center				
2. Homestead House		100,000*		
3. The Disneyland Resort		300,000	4,600	4,250,000 (theme park) 200,000 (meeting rooms/ convention space)
4. Hanover/Katella Office Park	1,235,375	56,000		
5. Stadium Towers	270,000			
6. Stadium Towers Plaza		21,395		16,080 restaurant
7. Metrocentre (Phase III)	24,430			
8. Sportstown Anaheim	250,000	750,000	500	150,000 (exhibition space)
9. Stadium Crossings	105,000	7,650	140	11,050 restaurant 36,500 fitness
10. Four Points Sheraton			72	
11. Anaheim Convention Center				919,865
12. Courtyard by Marriott			252	
13. Self Storage Facility	750			91,560 (storage space)
14. Arena Corporate Center	810,000		200	7,000 (restaurant) 5,000 (day car facility)
Projects Outside Anaheim				
14. Theo Lacy Prison				587,498 (1,785 beds)*
15. Santa Fe Depot Specific Plan				39,465 (retail/restaurant)
Related Projects Totals	2,695,555	1,235,045	5,764	6,314,018
* Addition of rooms/square footage to existing use.				
Source: City of Anaheim, City of Orange, and Orange County Sheriff Department, September 1998.				

SECTION 5
ENVIRONMENTAL CONDITIONS, ENVIRONMENTAL IMPACTS,
CUMULATIVE IMPACTS, MITIGATION MEASURES, AND
SIGNIFICANT UNAVOIDABLE ADVERSE IMPACTS

This Section analyzes the project's environmental impacts for the following issues: land use; transportation and circulation; air quality; noise; earth resources; hydrology and water quality; employment, population, and housing; public services; utilities and energy; hazardous materials compliance; aesthetics; and cultural resources.

The environmental conditions are described for each issue. Potential impacts on the environment from the implementation of the MLUP are discussed. Mitigation measures are described that will reduce the impact of the project on the environment. This EIR incorporates both standard mitigation measures, which the City of Anaheim applies uniformly to projects within its jurisdiction, and additional mitigation measures, which are designed to mitigate specific impacts associated with implementation of the MLUP. Any significant unavoidable adverse impacts anticipated within an issue area (impacts that cannot be avoided or lessened with mitigation measures to a level that is less than significant) are described at the conclusion of each subsection.

The property owner and/or developer shall implement all mitigation measures in this section of the EIR or their environmental equivalent if approved by the City of Anaheim. Environmental equivalent shall mean any mitigation measure and timing thereof, subject to the approval of the City, that will have the same or superior result and will have the same or superior effect on the environment. The Planning Department, in conjunction with any appropriate agencies or City departments, shall determine the adequacy of any proposed "environmental equivalent/timing" and, if determined necessary, may refer said determination to the Planning Commission. The City will ensure compliance through the mitigation monitoring process.

5.1 LAND USE AND RELATED PLANNING PROGRAMS

Land use issues addressed in this section include the related plans and policies governing existing and future conditions in the area of the MLUP. This section also discusses the existing and proposed land uses in the project area; the compatibility of land use conditions, such as density, height, and bulk of land uses adjacent to the project area with those within the project area.

5.1.1 ENVIRONMENTAL CONDITIONS

Onsite Land Uses

Existing land uses within the project area are depicted in Exhibit 5.1-1. The project site encompasses an area of approximately 550 acres surrounding the Stadium, and includes the Pond, various light industrial buildings, several industrial parks, distribution facilities, offices, hotels, and supporting retail uses. An underground storm-drain channel extends along the western portion of the project site in a north/south direction.

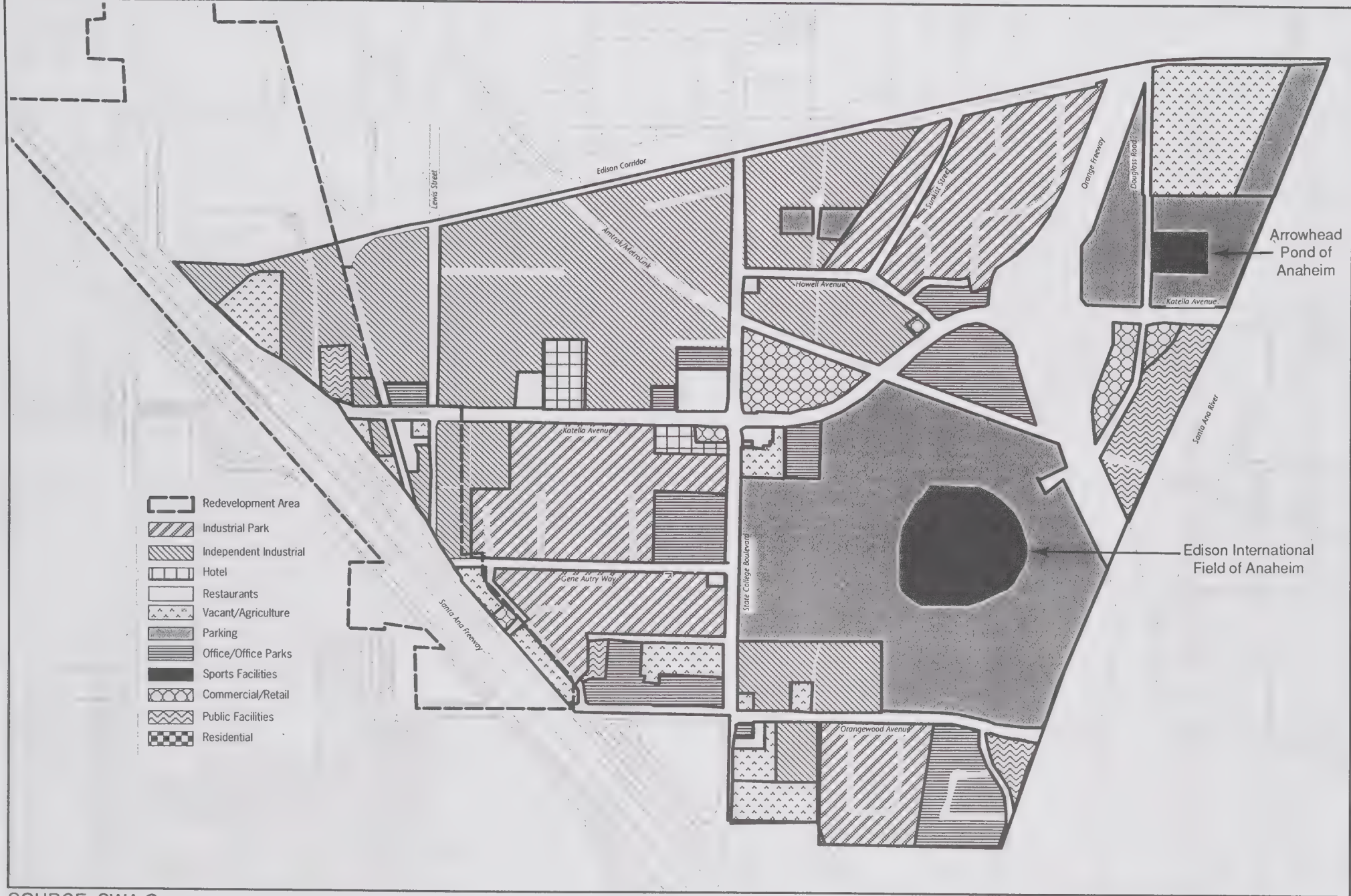
Surrounding Land Uses

Existing land uses in the project area include the Stadium, the Pond, various light industrial buildings, several industrial parks, distribution facilities, offices, hotels, and supporting retail uses. The site is bounded by the Santa Ana River channel and SR-57 to the east, the Anaheim City Limit to the south, I-5 to the west, and the Edison Corridor to the north. Similar types of land uses that are found within the MLUP area are also located adjacent to the project site, including some residential uses, which are located further to the south in the City of Orange.

Related Planning Programs

Several local and regional plans and programs apply to, or are currently being prepared related to, development in and around the MLUP area. Table 5.1-1, Related Plans and Policies, lists the related plans and policies analyzed in this EIR. These include elements of the City of Anaheim General Plan, Katella Avenue Smart Street, South Central Area Sewer Deficiency Study, the County's Commuter Bikeway Strategic Plan, and City of Anaheim Underground Utility Conversion Program.

The Anaheim Resort Specific Plan, The Disneyland Resort Specific Plan, elements and policies of transportation plans for the County of Orange and the County's Congestion Management Plan, and regional plans such as the Air Quality Management Plan, Growth Management Plan, Regional Mobility Plan, and various other transportation plans are incorporated by reference into this document. The following discussion identifies these plans and policies.



SOURCE: SWA Group.



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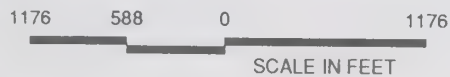


Exhibit 5.1-1 Existing Land Uses

ANAHEIM STADIUM AREA MASTER LAND USE PLAN EIR

**TABLE 5.1-1
RELATED PLANS AND POLICIES**

Relevant Planning Programs
City of Anaheim Planning Programs
City of Anaheim General Plan <ul style="list-style-type: none"> • Land Use Element • Circulation Element • Scenic Highway Element • Redevelopment Element • Environmental Resource and Management Element • Parks, Recreation, and Community Services Element • Noise Element • Housing Element • Growth Management Element • Safety and Seismic Safety Element
City of Anaheim Zoning Ordinance
Development Planning Programs <ul style="list-style-type: none"> • The Disneyland Resort Specific Plan • Hotel Circle Specific Plan • The Anaheim Resort Specific Plan • Convention Center Betterment IV Project • Infrastructure Planning Programs • Utility Underground Conversion Program • South Central Area Sewer Deficiency Study • Master Plan of Drainage for the South Central Area • Anaheim Transportation Plans • Anaheim Convention Center Expansion
Regional Planning Programs
Orange County Planning Programs <ul style="list-style-type: none"> • Master Plan of Arterial Highways • Orange County Congestion Management Program • Orange County Commuter Bikeways Strategic Plan
South Coast Air Quality Management District (SCAQMD)/Southern California Association of Governments (SCAG)
Regional Planning Programs <ul style="list-style-type: none"> • 1991 Air Quality Management Plan • Regional Mobility Plan • Growth Management Plan
Regional Transportation Planning Programs
California Department of Transportation (Caltrans) Interstate 5 Widening Project
Orange County Transportation Planning Projects <ul style="list-style-type: none"> • Katella Avenue Smart Street Project
Other Transportation Planning Programs <ul style="list-style-type: none"> • Orange County Major Investment Study for Urban Rail, Enhanced Bus, Transportation Systems Management, Freeway/Roadway (HOV) or No Build • Orange County Commuter Rail Study • SR-91 Freeway Widening and HOV Lanes • SR-57 Freeway Extension to I-405 • Transit Way Interchange at Cerritos Avenue and the SR-57 Freeway • Anaheim Stadium Metrolink/Amtrak Rail Station Improvement Project • Amtrak Commuter Rail Feasibility Study • I-5 "Intelligent Transportation Systems"—Radio Advisory and Changeable Message Signs • SR-57/State College Boulevard "Smart Corridor"—Radio Advisory, Changeable Message Signs, and Closed Circuit Television Cameras • Regional bikeway connection of the Santa Ana River Trail and the Anaheim Stadium Metrolink/Amtrak Station • Metropolitan Drive Extension
Other City Planning Programs
<ul style="list-style-type: none"> • City of Orange General Plan

An analysis of the project's consistency with the objectives, goals, and policies of the City of Anaheim's General Plan is provided in the "environmental impact" discussion of this section. This EIR also addresses the project's conformity to the General Plan.

City of Anaheim Planning Programs

City of Anaheim General Plan

Adopted in 1963, comprehensively updated in 1984, and continually amended to meet City needs, the Anaheim General Plan establishes guidelines for future development and redevelopment within the City. The General Plan includes the following elements, which are discussed in this section: Land Use; Circulation; Scenic Highway; Redevelopment; Environmental Resource and Management; Safety and Seismic Safety; Noise; Housing; Parks, Recreation, and Community Services; and Growth Management.

The General Plan covers Anaheim's sphere of influence that includes the approximate 50-square-mile corporate City limits, which is divided into two major planning areas. The Anaheim Stadium Area site is located in Planning Area A, which consists primarily of the urbanized area of the City west of the Santa Ana River. Planning Area B consists of developed and undeveloped portions of the hill and canyon area of Anaheim east of the State Route (SR) 91/SR-55 interchange. The following describes some of the relevant aspects of the Anaheim General Plan.

Land Use Element

Exhibit 3-3 shows the existing General Plan Land Use Element designations for the project site. The Land Use Element designates Commercial Recreation and Business Office/Service/Industrial land uses. The Commercial Recreation land use category is intended to provide for the development of businesses directly related to the recreation and entertainment industries that provide services to visitors and tourists. The Business Office/Service/Industrial land use category is intended to provide for and encourage the development of major business and professional office centers with supporting commercial uses. A discussion of existing land uses was included earlier in this section under onsite land uses and surrounding land uses.

Goals for commercial development set forth in the Land Use Element include meeting the continuing needs and demands of the community for commercial goods and services, increasing sales tax yields to enhance the economic base of the community, and maintaining and enhancing the position of Anaheim as a nationally recognized tourist center. Two of the Land Use Element policies directly related to development of Commercial Recreation uses are as follows:

- Encourage the development of quality facilities which complement conventions, family entertainment, and recreation within appropriate areas of the community.
- Maintain the integrity of the areas designated as Commercial Recreation by permitting only compatible land uses within these designated areas.

Areas to the north of the MLUP area site are designated General Industrial. Areas to the west of the project site are designated Commercial Recreation. Areas to the south and east (east of the Santa Ana River) are outside of the General Plan planning areas. The Anaheim General Plan land use map also identifies a City Riding and Hiking Trail and a Flood Control Channel associated with the Santa Ana River also located immediately east of the site.

Circulation Element

The Circulation Element of the General Plan describes existing and proposed major thoroughfares, transportation routes, and terminals, all correlated with the Land Use Element. Existing conditions of the circulation system in the project vicinity are discussed in greater detail in Section 5.2, Transportation and Circulation, of this EIR.

The Circulation Element designates improvements to the circulation system of the City of Anaheim. The following is a general list of those improvements that would occur throughout the City's Planning Area A that are relevant to the project:

- Implementation of traffic controls by measures of special signalization and contingency parking plans, including shuttle bus service between the Disneyland/Convention Center area and the Anaheim Stadium Area.
- Reducing traffic through an alternative transportation information program/service.
- Provide "critical intersections" with additional street width in excess of the Standard Arterial Highway Requirements because of their strategic location and need to accommodate high present and/or future traffic volumes and turning movements.
- Upgrading the capacity of Katella Avenue and Harbor Boulevard to major arterial classification as part of OCTA's Smart Street Program.

In addition, the Circulation Element identifies a Class III bicycle path along State College Boulevard, Orangewood Avenue, and Sunkist Street within the project area.

Environmental Resource and Management Element

The Environmental Resource and Management Element consolidates goals and policies for the Conservation and Open Space Elements. The purpose of this consolidation is to recognize the interrelationships, similarities, and overlapping responsibilities of these elements and to develop goals and policies which reflect those same concerns.

Safety and Seismic Safety Element

The major intent of the Safety and Seismic Safety Element is to identify and appraise hazards resulting from fire, geologic and seismic, flood, and disaster occurrences in order to reduce the risk of these hazards to the public. This Element serves to identify the risk associated with any existing or proposed development, and comparing it with the risk of alternative plans and programs so that planning decisions can be made to enhance the safety of the entire City. The reduction in the risk to life, property, and society is the ultimate achievement of this Element.

Although much of the urbanized county area adjacent to the Santa Ana River, including the project site was located within the 100-year flood plain, improvements to the Santa Ana River downstream of Imperial Highway have been completed and these urban areas are not currently located within the 100-year flood plain. However, some portions of the project area are within the "A99" zone in which federal flood protection improvements are under construction. No base flood elevations have been determined for these areas. Emergency Facilities, Evacuation Routes, and Hazardous Areas map also identifies the presence of the Metrolink commuter rail/Amtrak line extending through the northern portion of the site.

Housing Element

The Anaheim Housing Element was amended in 1990 with an update scheduled for 1999. The goal of the Housing Element is to plan for the provision of a wide variety of housing opportunities to meet the needs of all economic segments of the community. The Housing Element states that housing development can be considered in nonresidential areas; however, no specific nonresidential areas are identified as potential areas for housing development. Further, the Commercial Recreation and Business Office/Service/Industrial land use designations do not include residential uses. Section 5.7, Employment, Population, and Housing, of this EIR provides additional discussion of housing supply and demand in the City.

Noise Element

The Noise Element was adopted in 1979 and comprehensively updated in 1984. The goals of the Element are to protect the community and noise-sensitive land uses, through the City, from excessive noise. The Noise Element policies encourage noise reduction from all sources, including mobile and stationary sources.

Parks, Recreation, and Community Services Element

Adopted in 1992, the Parks, Recreation, and Community Services Element consolidated the Riding/Hiking Trail, Parks, and Recreational Facilities and Community Services Elements into a single comprehensive document. The element provides policy guidance through the year 2010. The purpose of this element is to enhance the overall quality of life by providing a full range of park, recreation, and community service facilities and programs that are accessible to all residents, workers, and visitors. The goals and policies address issues such as the development of park and community service facilities and enhancing visual appeal by development and maintenance of medians, parkways and street trees and enhancing Anaheim's parks, recreation, and services development. The Riding and Hiking Trails Master Plan map of the Parks, Recreation, and Community Services Element identifies a regional trail to the east of the project site that extends along the Santa Ana River.

Growth Management Element

The City of Anaheim adopted a Growth Management Element in early 1992 as part of the City's General Plan. The Growth Management Element provides goals and policies to enable the City to better balance public infrastructure and service needs in relation to plans for new growth and intensification of land use in the City, to establish development priorities citywide, and to develop land use strategies to reduce vehicle miles traveled. Additionally, the Growth Management Element addresses coordination between the City's element and regional agencies' growth plans and policies. Relevant regional planning programs are discussed in greater detail later in this section.

City of Anaheim Zoning Ordinance

The project site is predominately zoned ML (Limited Industrial), RS-A-43,000 (Residential/Agricultural), CO (Commercial, Office and Professional) and PR (Public Recreation), which includes the Stadium and the Pond.

The Public Recreation Zone is intended to establish a zone to preserve, regulate, and control the orderly use of City-owned properties and facilities for the benefit of the health, safety, and general welfare of the citizens of Anaheim and adjacent private property.

The Commercial, Office, and Professional zone is intended to provide for and encourage the development of business and professional office centers essential to Anaheim's economic health, preservation, and growth potential.

Development Planning Programs

The Anaheim Resort Specific Plan

The Anaheim Resort Specific Plan (zoning designation SP92-2) consists of approximately 549.5 acres which includes two land use districts and a Mobilehome Park Overlay. The C-R (Commercial Recreation) District allows for hotels, motels, convention and conference facilities, as well as restaurants, retail shops, and entertainment facilities. The PR (Public Recreational) District encompasses the Anaheim Convention Center and associated parking facilities and provides for the orderly use of City-owned property and the existing Anaheim Hilton Hotel. The Mobilehome Park (MHP) Overlay encompasses existing mobilehome parks within the C-R District to provide development standards for mobilehome parks with regulations and procedures to mitigate relocation concerns and adverse effects of displacement upon mobilehome owners/residents when a park is converted to another land use.

The Disneyland Resort Specific Plan

The Disneyland Resort Specific Plan (zoning designation SP92-1 encompasses approximately 489.7 acres located generally south and west of I-5 (refer to Exhibit 4-1). The Disneyland Resort Specific Plan is analyzed as a separate but related project in Section 4, General Description of Environmental Setting, of this EIR.

The property within The Disneyland Resort Specific Plan area is currently developed with the existing Disneyland theme park and parking lot, the Disneyland Hotel complex, land currently used for agricultural purposes, and support and administrative facilities for the theme park. In addition, several parcels within the Specific Plan area are currently occupied by other uses, including hotels, parking lots, restaurants, retail shops, recreational vehicle parks and campgrounds, a tennis club, and a service station, or are vacant. The adopted Specific Plan creates five districts: Theme Park District, a Hotel District, a Parking District, a Future Expansion District, and C-R Overlay with the intent of changing the area from a day-oriented attraction to a multi-day destination resort. The Disneyland Resort Specific Plan provides for the development of an international multiday vacation destination resort, including the development of a new theme park, known as Disney's California Adventure, additional hotels and entertainment areas, administrative office facilities, support facilities (i.e., maintenance facility, accessory uses, and staging areas), new public and private parking facilities, and an internal

transportation system. Said plan additionally provides for the existing Disneyland theme park to continue to be modified with new attractions and other improvements.

The Disneyland Resort Specific Plan contains zoning and development standards to regulate development. These include standards for design, landscaping, signage, and building height to enhance aesthetic conditions in the area.

Anaheim Convention Center Expansion

The City of Anaheim is currently expanding the Anaheim Convention Center. The expansion includes approximately 223,566 additional sf of exhibit hall space, a maximum of 158,301 sf of meeting space, the removal of 42,500 sf of ballroom space, and 63,000 sf of arena space. An additional 24,000 sf of administration space and 297,241 sf of other space (building service areas, mechanical equipment areas, restrooms, and storage areas) are also proposed to accommodate the additional exhibit, meeting, and ballroom space.

Infrastructure Planning Programs

Utility Underground Conversion Program

The City of Anaheim has an adopted utility program which includes undergrounding of overhead facilities (e.g., electric, telephone, television cable). According to the plan that was approved by the Anaheim City Council, undergrounding of utilities is planned along Katella Avenue and State College Boulevard.

Anaheim Transportation Plans

In conformance with California State Law (Proposition 111), the City submits biannually to the OCTA a 7-year Congestion Management Plan (CMP) Capital Improvement Program, Maintenance of Effort Budget, and adopted Transportation Demand Management (TDM) Ordinance in an effort to achieve congestion management and air quality improvement objectives.

The City of Anaheim is participating in many transportation plans and programs. These are intended to improve mobility in the City.

Along with the Orange County Transportation Authority (OCTA), the City of Anaheim completed a Major Investment Study for an Orange County Urban Rail Project (a north-south rail transit project from Irvine Spectrum to the south, through Anaheim, and north to the Fullerton Transportation Center). Although several alternatives were considered, a hybrid alternative, Locally Preferred

Strategy, was chosen that includes expanded bus service, improvements along Harbor Boulevard and other key streets, expanded Metrolink capacity, and a railway extending from the Fullerton Transportation Center to the Irvine Transportation Center (connecting to the Metrolink system). The Locally Preferred Strategy was adopted after the OCTA conducted an extensive public outreach program in 1997. On May 8, 1998 OCTA issued a Notice of Preparation (NOP) for the Urban Rail Project. The NOP designates the Stadium station as a Regional Transportation Center.

The City of Anaheim has completed the Amtrak/Metrolink station located in the northern portion of the Stadium parking lot. The Southern California Regional Rail Authority coordinated the second rail track for this project.

Other plans include the Regional Bikeway Connection from the Santa Ana River Trail to the Amtrak/Metrolink station which was completed by OCTA; and the mitigated negative declaration for the State College Boulevard/Katella Avenue intersection widening project was adopted in 1991.

Regional Planning Programs

Orange County Planning Programs

Master Plan of Arterial Highways (MPAH)

The County's Master Plan of Arterial Highways (MPAH) designates roadways throughout Orange County, which serve as regional arterial routes. In the spring of 1995, OCTA assumed all responsibilities for overseeing the implementation of the MPAH and its goals and policies from the County of Orange. This requires that any changes proposed to arterial designations on the MPAH by cities be processed through the OCTA in the same manner as before. As the MPAH would no longer be part of the County's Transportation Element, alterations to this plan would no longer require an amendment to the County's General Plan Transportation Element. Major roadways designated on the MPAH within the project area include Katella Avenue, State College Boulevard, and Orangewood Avenue.

Orange County Commuter Bikeways Strategic Plan

The Orange County Commuter Bikeways Strategic Plan (CBSP) provides the policies and practices which help to define the role of bicycle travel within Orange County. According to the CBSP, a Class II (on-road, striped lanes) bikeway is located to the north, south, and west of the site along Katella Avenue, Orangewood Avenue, and State College Boulevard, respectively. Additionally, a Class I (off-road, paved) bikeway is located on the eastern border of the project site along the Santa Ana River.

Orange County Congestion Management Program (CMP)

California State Law (Proposition 111) requires each county to adopt a CMP that outlines how vehicular congestion issues will be addressed over a 7-year period. A summary of components required by the CMP is as follows:

- a. Land Use Coordination. The CMP requires establishment of a program that analyzes the impacts of land use decisions made by local jurisdictions on regional transportation systems. The program shall also estimate the costs associated with mitigating identified impacts.
- b. Transportation Modeling. The CMP requires development of a database and transportation modeling system that are consistent with those used by SCAG.
- c. Level of Service (LOS). The CMP requires that traffic LOS standards be established for the CMP Highway System which shall include at a minimum all state highways and principal (major) arterials. The CMP requires that an LOS standard be set at "E" or at the existing LOS, whichever is further from LOS "A," for any intersection or roadway segment on the CMP Highway System.
- d. Public Transit Standards. The CMP requires that standards for the frequency and routing of public transit be established and that transit service provided by separate operators be coordinated.
- e. Transportation Demand Management (TDM). The CMP requires that jurisdictions adopt and implement a TDM ordinance that promotes alternative transportation methods.
- f. LOS Deficiency Plans. The CMP requires that Deficiency Plans be prepared that describe how excessive congestion on the CMP Highway System can be mitigated in those cases where acceptable LOS cannot be met at certain locations.
- g. Capital Improvement Program (CIP). The CMP requires establishment of a 7-year CIP to maintain or improve LOS and transit performance standards and assist in achieving congestion management and air quality improvement objectives.
- h. Bi-Annual Monitoring. The CMP requires that the Congestion Management Agency (CMA) created through SB 838, which in Orange County is the OCTA, bi-annually determine if the County and Cities are conforming with CMP requirements and shall monitor the implementation by each jurisdiction of all elements of the CMP. In accordance with the Orange County CMP, adopted by the OCTA, the City of Anaheim adopted a Transportation Demand Management Ordinance in 1991.

The Orange County CMP was adopted in July 1991 by OCTA. The CMP is reviewed every two years. The last review of the CMP occurred in 1996 and the next review will be completed in Fall 1998 (Campbell, pers. comm., 1998). Development of the plan involved a coordinated effort among local jurisdictions, public agencies, and business and community groups in the County. The CMP

contains provisions for a number of elements intended to improve the County's transportation systems. The following elements are included for the first year of the plan:

- Traffic LOS standards for the CMP Highway System and measurement of existing LOS
- Adoption of Transportation Demand Management ordinances by all Orange County local jurisdictions
- A 7-year Capital Improvement Program
- Transit service standards and development of a short-range transit plan
- A monitoring checklist process for the four items above

Additionally, OCTA has adopted the processes and framework for land use coordination, model and data base uniformity, and level of service deficiency plan components. These components are being updated in connection with the 1992 Orange County CMP. The City of Anaheim is a participant in the CMP process with the County and has been complying with the above elements pursuant to the County CMP with respect to transportation-related planning and management for the City.

South Coast Air Quality Management District (SCAQMD) - Southern California Association of Governments (SCAG) Regional Planning Programs

1991 Air Quality Management Plan

The SCAQMD Board adopted an Air Quality Management Plan (AQMP) revision on July 12, 1991, which was prepared to address requirements of the California Clean Air Act. It was prepared prior to adoption of the 1990 amendments to the federal Clean Air Act and did not address federal attainment planning requirements. The SCAQMD adopted a revised AQMP in July 1994 that addresses both state and federal requirements.

Specific AQMP measures seek to reduce vehicle trips (VT) and vehicle miles travelled (VMT), including an extension of SCAQMD Regulation XV that would further reduce work-related trips and other trip-reduction measures directed toward schools and indirect source facilities that attract vehicle trips, such as special event centers, regional shopping centers, and airports. Additional information on the AQMP, VMT reductions, and conformity guidelines is provided in Section 5.3, Air Quality, of this EIR. The analysis of the project's conformity with the AQMP is also presented in Section 5.3, Air Quality.

Regional Mobility Plan

The Regional Mobility Plan (RMP) selects the combination of infrastructure and transportation control requirements considered to best accommodate the projected population increases in the region until the year 2010 (SCAG 1994). Proposed projects must comply with the RMP prior to approval. The RMP is consistent with the Growth Management Plan, discussed below.

Growth Management Plan

The Growth Management Plan (GMP) prepared by SCAG contains projections of employment, population, and housing growth in the Basin and serves as the basis for regional planning efforts to accommodate growth and mitigate the impacts of such growth. In addition, the GMP establishes regional guidelines for local governments to manage growth, including balancing the distribution of future job and housing opportunities in the region (SCAG 1994). The plan also sets jobs/housing ratio goals for SCAG's region. Section 5.2, Transportation and Circulation, of this EIR addresses regional traffic circulation; and Section 5.3, Air Quality, addresses the GMP in light of regional air quality impacts.

Regional Transportation Planning Programs

California Department of Transportation (Caltrans) Interstate 5 Widening

This program involves reconstruction of I-5 throughout Orange County to widen and realign the freeway, add high occupancy vehicle (HOV) lanes, and implement interchange system improvements. Caltrans and the Federal Highway Administration (FHWA) have certified the EIR/EIS for the widening project. Construction is underway with an anticipated completion date of 2000/2001. When complete, the widening of the I-5 will enhance regional access to the project area. The analysis in Section 5.2, Transportation and Circulation, of this EIR assumes completion of I-5 improvements by that date.

Orange County Transportation Planning Projects

Katella Avenue Smart Street Project

The County of Orange has certified an EIR for the Katella Avenue Smart Street Project. The EIR examined the potential impacts of widening Katella Avenue from Interstate 605 (I-605) to SR-55, including the segment that bisects the project area.

Other Transportation Planning Programs

In addition to the above transportation plans and projects, the following transportation studies and planning programs are in various stages of completion and are located within the vicinity surrounding the project area:

- OCTA Urban Rail Project
- Orange County Commuter Rail Study
- State Route 91 Freeway Widening and HOV lanes
- State Route 57 Freeway Extension to the Interstate 405 Freeway
- Transit Way Interchange at Cerritos Avenue and the State Route 57 Freeway
- Amtrak Commuter Rail Feasibility Study
- I-5 "Intelligent Transportation Systems" Radio Advisory and Changeable Message Signs
- SR-57/State College Boulevard "Smart Corridor" Radio Advisory, Changeable Message Signs, and Closed Circuit Television Cameras

Relevant transportation system improvements are discussed further in Section 5.2, Transportation and Circulation, of this EIR.

Other City Planning Programs

City of Orange General Plan

The City of Orange is located to the east and south of the project site. In 1989, the City of Orange adopted a comprehensive update to each element in its General Plan. This update was prepared to reflect more current conditions within the City and the more recent desires of the City relative to long-term growth.

5.1.2 ENVIRONMENTAL IMPACTS

Implementation of the MLUP will require several discretionary actions and will result in the development of approximately 550 acres around the Stadium and include the implementation of a Zoning Overlay. Under the Zoning Overlay, the project area will be divided into five districts, resulting in the development at buildout of approximately 13.3 msf.

Thresholds of Significance

The proposed project will result in a significant impact on the environment related to land use issues if:

- Substantial compatibility conflicts between onsite and/or offsite land uses are created.
- The project is inconsistent with the goals, objectives, or policies/implementing actions of any local, state, or federal plan or program.
- Land use compatibility and operational conflicts are considered significant if they will lead to impacts to the health and general welfare of person living or working in the area, or physical impacts on adjacent properties that would, in turn, lead to physical degradation causing disinvestment or abandonment.

Land Use Compatibility

Land use compatibility is primarily determined by the sensitivity of land uses to the characteristics associated with another land use, such as activity, noise, density, height, bulk, and/or appearance. Therefore, other sections of this EIR, which analyze these environmental changes, are relevant to the analysis of land use compatibility and are referenced in this discussion.

Compatibility With Onsite Land Uses

The development of the project site will be implemented in a manner that will minimize potential land use conflicts internal to the site. Because of the consistency of the land uses being proposed onsite, no significant internal land use compatibility impacts are expected to occur with project implementation.

Compatibility With Surrounding Land Uses

The project's compatibility is dependent upon a number of issues such as activity, intensity of use, and appearance of the MLUP compared with the existing surrounding land uses. Compatibility with surrounding land uses can be separated into two categories: (1) compatibility of developing uses with surrounding properties, and (2) potential ongoing operational conflicts with surrounding uses. Such incompatibilities and conflicts are characterized by nuisances, such as odor and noise, physical or visual intrusion into the adjacent land uses, substantial traffic intrusion or operational intrusion, or increased risk to human safety. Without appropriate site planning that includes adequate separation of uses, buffers, setbacks, and safeguards, such conflicts could be significant. As indicated previously, the land uses proposed within the MLUP area are designed to be internally compatible with each other and other adjacent uses.

No potential significant incompatibilities between the proposed land uses within the project site and the surrounding area are anticipated because the proposed uses have been designed to complement and support the land uses within the surrounding area. Further, the MLUP area and the surrounding area will have similar or compatible operation requirements (e.g., hotels, restaurants, and parking facilities.)

City of Anaheim Planning Programs

City of Anaheim General Plan

Land Use Element

The proposed industrial, office, retail, and hotel uses are consistent with the goals and policies of the Anaheim General Plan Land Use Element for the project site, as development of the site will contribute to improving the City's economic base, enhancing the position of Anaheim as an internationally recognized tourist destination, and providing compatible land uses within the project area. The goals and objectives of the MLUP are further discussed in Section 3.3, Project Objectives, of this EIR.

As discussed in Section 2.2, Project Description, of this EIR, the project includes the implementation of land uses as a Zoning Overlay. Exhibit 3-2, Project Vicinity Map, of this EIR provides in detail the boundaries of the project site.

Circulation Element

Circulation system improvements proposed as part of the MLUP are discussed in Section 5.2, Transportation and Circulation, of this EIR. These could include improvements to vehicular circulation, mass transit, and pedestrian circulation. The recommended circulation improvements are consistent with circulation plans for the area and would not result in a significant impact on these plans because they would improve pedestrian circulation and would not substantially reduce overall vehicular circulation capacity of the project area. Therefore, the project would be consistent with the goals and policies of the Circulation Element.

Environmental Resource and Management Element

The proposed project is considered to be consistent with the objectives of the Environmental Resource & Management Element. Much of the urbanized County area adjacent to the Santa Ana River, including Anaheim, was located within the 100-year flood plain; however, improvements to the Santa Ana River downstream of Imperial Highway have been completed and these urban areas are not

currently located within the 100-year flood plain. Development of the proposed project would not be affected by a 100-year flood plain.

Safety and Seismic Safety Element

The proposed project is considered to be consistent with the objectives of the Safety and Seismic Safety Element. Section 5.5, Earth Resources, Section 5.6, Hydrology and Water Quality, and Section 5.11, Public Services, Utilities, and Energy Consumption, of this EIR, provide detailed discussion regarding relevancy with geologic and seismic and flood hazard goals and policies, respectively, as identified in the Safety and Seismic Safety Element.

Housing Element

The proposed project does not include development of residential uses. Although the project would not have a direct effect on housing, implementation of the MLUP is expected to increase employment opportunities within the City of Anaheim. Consequently, a certain number of these employees would require housing within the City or surrounding communities. However, the project is not expected to result in significant adverse impacts to the City's goal associated with the opportunity for these employees to find decent, affordable housing in safe, attractive City neighborhoods. Potential effects on the housing supply and demand are discussed in Section 5.7, Employment, Population, and Housing, of this EIR.

Noise Element

Development of the proposed MLUP would be subject to the mitigation measures set forth in this document and the Mitigation Monitoring Program addressing noise issues. Mitigation measures include restricting construction activities to comply with the City's Sound Pressure Level Ordinance, transportation improvements to reduce traffic congestion (and, therefore, noise) on arterials, and providing for buffering noise walls and berms in noise-sensitive areas. No significant indirect impacts or inconsistencies with the Noise Element are anticipated. The complete noise analysis can be found in Section 5.4, Noise, of this EIR.

Parks, Recreation, and Community Services Element

The project will help the City of Anaheim achieve goals established for parks, recreation, and community service in several ways. Enhanced landscaping and streetscaping will be provided on the project site. In addition, landscaped gateways and medians are proposed as part of the project to create safe and visually appealing public walkways. The proposed project also builds upon the existing character of the Stadium site as an established recreation center, with features that support and

enhance this character. Overall, the proposed project will enhance recreational opportunities. Further, the proposed project will provide residents, conventioners, tourists, and workers with more leisure options. Therefore, no conflicts or significant impacts to the Parks, Recreation, and Community Services Element are anticipated.

Growth Management Element

Development of the MLUP will be accompanied by improvements in public infrastructure and services, as discussed in Section 5.8, Public Services and Utilities, of this EIR. The project's consistency with Growth Management Element policies is established by addressing the needed infrastructure improvements, including reduction to vehicle miles traveled (VMT) and improvements to public facilities and services. As the project is developed, infrastructure improvements will be made to ensure that implementation of the proposed project would not affect facilities that would serve the site or surrounding area. In addition, the project area is identified in the City's Economic Development Strategic Plan as a priority growth area. Overall, the proposed project is consistent with the Growth Management Element in that it identifies needed improvements to existing infrastructure and public services and facilities and incorporates measures to provide these needed improvements. Therefore, no significant impacts on the goals of the Growth Management Element are anticipated. As required by the element, the EIR mitigation measures will adequately pace project development with the provision of any needed infrastructure and public services.

City of Anaheim Zoning Ordinance

The project site is predominantly zoned ML (Limited Industrial), RS-A (Residential/Agricultural), CO (Commercial Office and Professional) and PR (Public Recreation), which includes the Stadium and the Pond. Implementation of the project will include a Zoning Overlay that would allow the current uses to continue or expand within the provisions of existing zoning and provide optional development standards and regulation for the project site. The nature of this proposed action is consistent with state planning and land use law (e.g., making zoning consistent with the General Plan) and is compatible with the planning framework within the City, which is based on large-scale comprehensive planning.

Development Planning Programs

The Anaheim Resort Specific Plan

The Anaheim Resort Specific Plan provides for the development of hotels, motels, convention and conference facilities, as well as restaurants, retail shops, and entertainment facilities, in addition to providing for the orderly use of City-owned property. The eastern boundary of the Anaheim Resort Specific Plan site is located just west of the MLUP site. Implementation of the MLUP will take into

consideration the Anaheim Resort Specific Plan to ensure consistency with the General Plan (orderly use of City-owned property, etc.) and to avoid planning incompatibilities. Both plans are designed to provide linkage between the two areas, thereby enhancing the visual quality and infrastructure of the City and the project area, in addition to affirming the City's standing as a world-class resort destination. Therefore, no significant planning-related impacts on the Anaheim Resort Specific Plan are anticipated with development of the proposed project; rather, implementation of the proposed project would provide a beneficial effect on the plan.

The Disneyland Resort Specific Plan

The Disneyland Resort Specific Plan provides for the development of a new theme park, additional hotels, and public parking facilities within the Anaheim Resort. The MLUP site is located east of The Disneyland Resort Specific Plan area. Development of the MLUP will take into consideration The Disneyland Resort Specific Plan to ensure consistency with the General Plan and to avoid planning incompatibilities. Both plans are designed to provide linkage between the two areas, thereby enhancing the visual quality and infrastructure of the City and the project area, in addition to affirming the City's standing as a world-class resort destination. Therefore, no significant planning-related impacts to The Disneyland Resort Specific Plan are anticipated from the development of the proposed project; rather, implementation of the proposed project is expected to have a beneficial effect on the plan.

Anaheim Convention Center Expansion

The expansion of the Anaheim Convention Center would provide additional exhibit hall, meeting, and ballroom space. Similar to other regionally significant planning programs for recreational facilities (i.e., Disneyland Resort Specific Plan and Anaheim Resort Specific Plan) in the immediate area, development of the MLUP will take into consideration the Convention Center expansion to ensure consistency with the General Plan (orderly use of City-owned property, etc.) and to avoid planning incompatibilities. Both plans provide for the overall enhancement of the area and infrastructure of the City and the project area, in addition to affirming the City's standing as a world-class resort destination. Therefore, no significant planning-related impacts on the Convention Center expansion are anticipated from project development.

Infrastructure Planning Programs

Utility Underground Conversion Program

As part of the City of Anaheim's 5-year Underground Conversion Program, the City has approved undergrounding of all the existing and future utilities (69 kV and 12 kV transmission and distribution

systems, communication systems, telephone, CATV, and associated facilities) on the major roadways in the project area. Potential impacts on public services and utilities are discussed in Section 5.8, Public Services, Utilities, and Energy Consumption, of this EIR.

Anaheim Transportation Plans

The various transit modes available and planned to serve the City of Anaheim will facilitate visitors to the site who are arriving by transportation modes other than automobile. It is anticipated that shuttles from The Disneyland Resort and other hotels located within the Anaheim Resort will pick up/deliver guests of these hotels to the Anaheim Stadium Area site. OCTA buses will also provide service directly to the site, which will assist employees commuting by car. The project site may also be accessed via the potential Orange County Urban Rail and the existing Metrolink commuter rail/Amtrak rail line located in the northern portion of the project site. The project's accommodation of various means of transportation is considered a beneficial effect.

The MLUP incorporates measures to improve and maintain vehicular and mass transit improvements within the project area. These improvements are discussed in Section 5.2, Transportation and Circulation, of this EIR. The MLUP will comply with the City of Anaheim's Transportation Demand Management (TDM) program, which, in turn, will be in compliance with the Orange County CMP. In addition, the project will not significantly affect any designated critical intersections. No significant impacts are anticipated.

Regional Planning Programs

Orange County Planning Programs

Master Plan of Arterial Highways (MPAH)

The MLUP does not propose any changes to OCTA's MPAH, as discussed in Section 5.2, Transportation and Circulation, of this EIR. Future developments proposed within the project area are not expected to require changes to the MPAH. Therefore, no significant impact to this program is anticipated with implementation of the project.

Orange County Commuter Bikeways Strategic Plan

The MLUP does not propose any changes to the CBSP, nor is the project expected to affect (relocate, limit access, etc.) those bikeways located within the vicinity of the site. Future development proposed within the project area is also not expected to require changes to the CBSP. Therefore, no impact to this program is anticipated with implementation of the project.

Orange County Congestion Management Plan (CMP)

As discussed in Section 5.2, Transportation and Circulation, of this EIR, the project will not degrade any portion of the CMP network to an unacceptable level of service after mitigation and, therefore, will be consistent with the goals of the CMP. The City is complying with the OCTA-established CMP, and future developments proposed within the project area will be required to comply with area TDM programs, in conformance with the CMP. No significant impacts are associated with the project.

South Coast Air Quality Management District (SCAQMD)/Southern California Association of Governments (SCAG) Regional Planning Programs

1991 Air Quality Management Plan

Conformance of the project with the AQMP is discussed in Section 5.3, Air Quality, of this EIR. The project complies with all three criteria of the plan: (1) VMT reduction or jobs housing balance, (2) TDM implementation, and (3) conformity with AQMP assumptions; therefore, no significant impacts are associated with the project.

Regional Mobility Plan (RMP)

As discussed in Section 5.2, Transportation and Circulation, of this EIR, the project will contribute to infrastructure improvements and transportation control measures that will help accommodate the projected population growth in the region. Therefore, the proposed project is considered consistent with the goals of the RMP, and no significant impacts are anticipated (refer to Section 5.2, Transportation and Circulation, and Section 5.3, Air Quality).

Growth Management Plan

The relationship of the project to SCAG's GMP and regional transportation air quality issues is discussed in Section 5.2, Transportation and Circulation, and Section 5.3, Air Quality, of this EIR. The project is consistent with the plan, and no significant impacts are anticipated.

Regional Transportation Planning Programs

California Department of Transportation (Caltrans) Interstate 5 (I-5) Widening

The Caltrans I-5 improvement program, including the transitway and HOV lanes, will include two new HOV direct connector offramps from the freeway. These ramps will be in addition to the new and reconfigured mixed-flow ramps that are part of the Caltrans' plans for the I-5 improvement program and are part of the regional and local transportation programs.

As part of the I-5 widening project improvements, an I-5 HOV connector ramp will connect directly with the easterly extension of Gene Autry Way, which is a major access point/gateway into the project site. This change, in addition to the reconfiguration of the State College Boulevard on/off ramp, will provide for a greater ease of access to the site from I-5 and is considered to be a benefit to traffic flow in the area. As discussed in Section 5.2, Transportation and Circulation, of this EIR, the project provides for integration of the transportation and circulation improvements of future development projects with Caltrans' widening of I-5; therefore, no significant adverse effects are anticipated.

Orange County Transportation Authority Planning Projects

Katella Avenue Smart Street Project

The Smart Street designation and funding of Katella Avenue will provide more capacity between I-605 and SR-55. This will accommodate traffic flow through the project area. There will be no significant impacts on the Smart Street project from plan implementation.

Other Transportation Planning Programs

A series of transportation plans and projects (SR-55 HOV Lanes, SR-91 HOV Lanes, etc.) are underway or have been completed that may involve the vicinity surrounding the MLUP site.

The Major Investment Study evaluated urban rail routes extending from Irvine Spectrum north to the Stadium and to connect with the Fullerton Amtrak Station. The Locally Preferred Strategy was chosen after an extensive public outreach program. The Locally Preferred Strategy includes expanded bus service, improvements along Harbor Boulevard and other key streets, expanded Metrolink capacity, and a railway extending from the Fullerton Transportation Center to the Irvine Transportation Center (connecting to the Metrolink system). Within Anaheim, an bus alignment connecting Anaheim Stadium to Fullerton was chosen: west on Katella Avenue and north along Harbor Boulevard with service extending along West Street and Ball Road around Disneyland. Improvements will also be made along I-5 for future bus service. The project will include a connection to the fixed guideway

system north on State College, east on Orangewood Avenue, north along SR-57, west along Katella Avenue and north on Harbor Boulevard in the City of Anaheim (Orange County Transportation Authority, June 1997). No significant project impacts will occur.

Implementation of these plans would provide a traffic flow benefit to the area. As discussed in Section 5.2, Transportation and Circulation, of this EIR, the MLUP provides for integration of these transportation plans and projects; therefore, no significant adverse effects are anticipated.

Other City Planning Programs

City of Orange General Plan

As the proposed project is not located within the jurisdiction or sphere of influence of the City of Orange, the City's General Plan does not directly pertain to development of the proposed project. Nevertheless, due to the proximity of the project to the City of Orange, the consistency of the proposed project with the general development plans enumerated in the General Plan are evaluated. Although impacts on the City's General Plan policies are not expected to occur with project implementation, issues (land use compatibility, traffic, aesthetics, etc.), as they relate to the City of Orange have been discussed under the individual environmental issues, as appropriate, as found in Section 5, Environmental Conditions, Environmental Impacts, Cumulative Impacts, Mitigation Measures, and Significant Unavoidable Adverse Impacts, of this EIR.

5.1.3 CUMULATIVE IMPACTS

The study area for land use takes into consideration the related projects' and the proposed project's consistency with plans, policies, and programs of the City of Anaheim and responsible agencies. As such, the "study area" is not considered except in the sense that each plan, policy, and program applies to a specific geographic area.

The additional development that will occur within the area of the MLUP site is expected to primarily consist of hotels, restaurants, and retail uses. The related projects shown in Table 4-1 and Exhibit 4-1, plus proposed related project development within the MLUP area would add a number of new hotel rooms, office space, and a variety of entertainment/retail uses. Therefore, for purposes of this analysis, it is assumed that the future land uses proposed as part of the project in conjunction with development of related projects would be consistent with the existing City of Anaheim General Plan and Regional Growth Management Plan and the other local and regional planning documents described in Section 5.1, Land Use and Related Planning Programs, of this EIR. Cumulative impacts associated with other land use issues such as drainage, traffic, noise, etc., are discussed elsewhere in this section.

The areas surrounding the site to the north, south, and west are fully developed with business service, office/professional, commercial, and light industrial-type uses. To the immediate east of the site is the Santa Ana River, in addition to commercial, office/professional, and light industrial-type uses. While future development is planned within a majority of area surrounding the site, the type of uses (office/professional, commercial, etc.) would be complementary to the project. In addition, existing land use relationships were established through development of the various land uses over time consistent with General Plan designations. The MLUP also addresses the issue of land use compatibility in terms of providing edge treatment with appropriate setbacks, height limits, design features, and landscape treatments to ensure compatibility with the existing and future surrounding development and to enhance the aesthetic quality of the area. Moreover, the intent of the project is to protect the integrity of the existing and future commercial recreation uses within the MLUP area.

The area influenced by cumulative land use compatibility impacts is within the boundaries of the site and the immediate surrounding areas. Due to the types of land use surrounding the project site, land use compatibility with more distant areas will not likely be affected by the implemented land uses of the proposed project. Related projects in the surrounding area have been included in Table 4-1 if they have either been (1) submitted for plan processing, (2) approved by the City of Anaheim or adjacent cities, and/or (3) have been engaged in active construction. Largely a developed area, the established land use patterns and intensities are reinforced by General Plan designation for the site.

5.1.4 MITIGATION MEASURES

Mitigation Measure 1-1. The City will review final site plans for development within the MLUP for consistency with any adopted plan for the area.

5.1.5 SIGNIFICANT UNAVOIDABLE ADVERSE IMPACTS

No significant unavoidable adverse effects are anticipated.

5.2 TRANSPORTATION AND CIRCULATION

This section summarizes the traffic study for the Anaheim Stadium Area MLUP prepared by Austin-Foust Associates in August 1998. The complete report is contained in Appendix C of this document. The technical report includes an assessment of the impact of traffic that would be generated from implementation of the MLUP. This section also reflects information contained in the 1996 Anaheim Sports Center Final EIR.

The purpose of this analysis is to identify the traffic implications associated with the MLUP and to recommend mitigation measures, if necessary, that will provide adequate levels of service on the internal and surrounding circulation system. The analysis assumes buildout of the City's General Plan, generally considered to be 20 years in the future. The buildout conditions include buildout of the City's land uses as well as the circulation system. Other than the extension of Gene Autry Way across I-5 Freeway, no new notable roads are anticipated to be built in the study area. Katella Avenue is assumed to be widened to eight lanes west of State College Boulevard, and the entire segment in the study area is classified as a "smart street."

Specific traffic impacts of the proposed MLUP were identified by analyzing project traffic volumes as determined by the Anaheim Traffic Analysis Model (ATAM). This model is a computerized trip generation, distribution, and assignment tool that evaluates various land use and circulation schemes. A complete description of the traffic model can be found in Appendix C of this report.

5.2.1 ENVIRONMENTAL CONDITIONS

Surrounding Highway Network

The arterials which provide access to the study area include Lewis Street, State College Boulevard, Katella Avenue, Gene Autry Way, and Orangewood Avenue (see Exhibit 5.2-1).

Lewis Street is a north-south primary arterial on the Orange County Master Plan of Arterial Highways (MPAH). Lewis Street is assumed to be built out to its ultimate width of four lanes north of Gene Autry Way under buildout conditions. For this analysis, Lewis Street is assumed to terminate north of Gene Autry Way. Lewis Street continues south of Orangewood Avenue which is south of I-5 Freeway as a six-lane arterial. Study intersections along Lewis Street are located at Cerritos Avenue, Katella Avenue and Orangewood Avenue.

State College Boulevard is a north-south major arterial in the study area which becomes The City Drive south of I-5 Freeway. State College Boulevard is a six-lane facility in the study area. Study

intersections are located at Cerritos Avenue, Katella Avenue, Gene Autry Way and Orangewood Avenue.

Katella Avenue is an east-west principal arterial west of State College Boulevard and a major arterial east of State College Boulevard. Katella Avenue is an eight-lane “smart street” west of State College Boulevard and a six-lane “smart street” east of State College Boulevard. Study intersections along Katella Avenue are located at Lewis Street, State College Boulevard, and SR-57 Freeway ramps.

Gene Autry Way is an east-west primary arterial on the MPAH. Gene Autry Way currently terminates east of I-5 Freeway. Under buildout conditions, Gene Autry Way will extend west across the freeway and connect with Convention Way. The study intersection along Gene Autry Way is located at State College Boulevard.

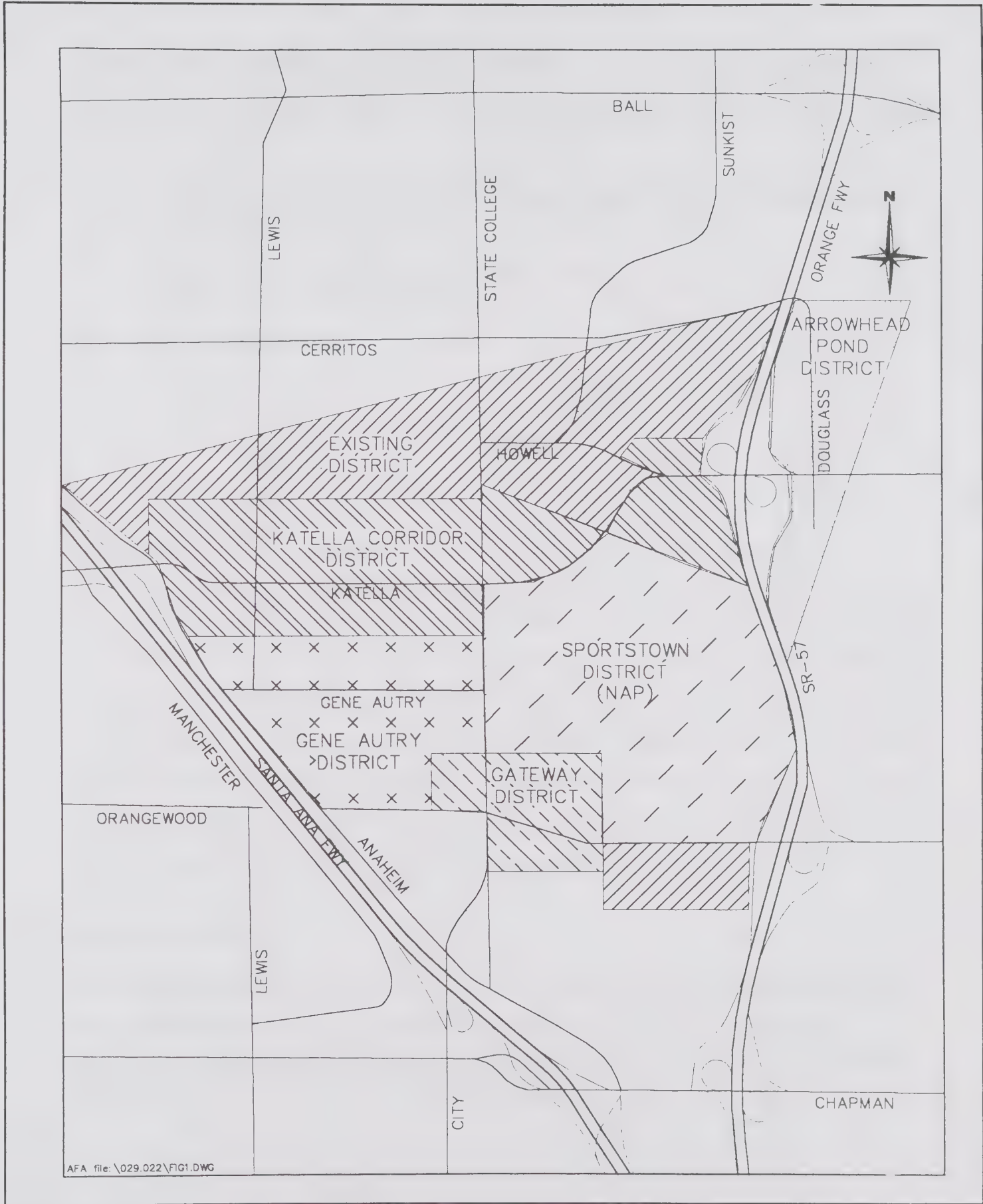
Orangewood Avenue is an east-west primary arterial which terminates at I-5 Freeway and becomes Walnut Avenue east of the study area. Orangewood Avenue is a four-lane arterial. Study intersections are located at Lewis Street, State College Boulevard, and SR-57 Freeway ramps.

Regional access to the study area is provided by I-5 Freeway and SR-57 Freeway. Interchanges on I-5 Freeway in the study area are provided at Katella Avenue. A high occupancy vehicle (HOV) on/off-ramp is planned at Gene Autry Way. Interchanges on SR-57 Freeway in the study area are provided at Katella Avenue and Orangewood Avenue.

Performance Criteria

Evaluating the ability of the circulation system to serve the desired future land uses requires establishing suitable "performance criteria." These are the means by which future traffic volumes are compared to future circulation system capacity, and the adequacy of that circulation system assessed.

For this analysis, the circulation system evaluation is based on peak hour data. Capacity needs tend to be most important at intersections, and the use of peak hour data enables intersection capacity needs to be determined. The detailed forecasting capability of the ATAM allows long-range peak hour data on the circulation system to be forecast with a reasonable level of accuracy. Forecasts are made at an intersection level with individual intersection turn movements being estimated. Based on these turn movement volumes, Intersection Capacity Utilization (ICU) values are estimated for the a.m. and p.m. peak hours. Peak hour refers to the hour during the a.m. peak period (typically between 7 a.m. and 9 a.m.) or the p.m. peak period (typically between 3 p.m. and 6 p.m.) in which the greatest number of vehicle trips are generated by a given land use or are traveling on a given roadway. The ICUs represent volume-to-capacity ratios for the forecast volumes and the assumed intersection lane configurations.



SOURCE: Austin-Foust Associates, Inc., August 1998.

The performance criteria for evaluating volumes and capacities on the street and highway system is summarized as follows:

Level of service (LOS) to be based on peak hour Intersection Capacity Utilization (ICU) values calculated using the following assumptions:

Saturation Flow Rate: 1,700 Vehicles Per Hour (VPH)

Clearance Interval: .05 of an ICU value

Levels of Service are as follows:

Level of Service	Maximum ICU Value
LOS A	0.60
LOS B	0.70
LOS C	0.80
LOS D	0.90
LOS E	1.00
LOS F	Above 1.00

As this summary indicates, a level of service (LOS) scale is used to evaluate intersection performance based on ICU values. The levels range from A to F, with LOS A representing free flow conditions and LOS F representing severe traffic congestion. Various operating LOS standards have been established which serve both as a guideline for evaluating observed traffic conditions and as a target or goal when evaluating future development plans and circulation system modifications. At the regional planning level, the statewide Congestion Management Program (CMP) specifies LOS E (peak hour ICU value less than or equal to 1.00) as the operating threshold for roadways and intersections on the CMP highway system. At the County and local level, the City of Anaheim and the Orange County Growth Management Program (GMP) have established LOS D (ICU value less than or equal to 0.90) as the worst acceptable level of service for peak hour intersection volumes.

Existing Intersections

The existing ICU values, based on the existing lane configurations for the area surrounding the project site, are summarized in Table 5.2-1 and illustrated in Exhibit 5.2-2 (actual ICU calculations are included in Appendix C). As the ICU table indicates, the intersections in the vicinity of the project are operating at County and City acceptable levels of service during the a.m. and p.m. peak hours.

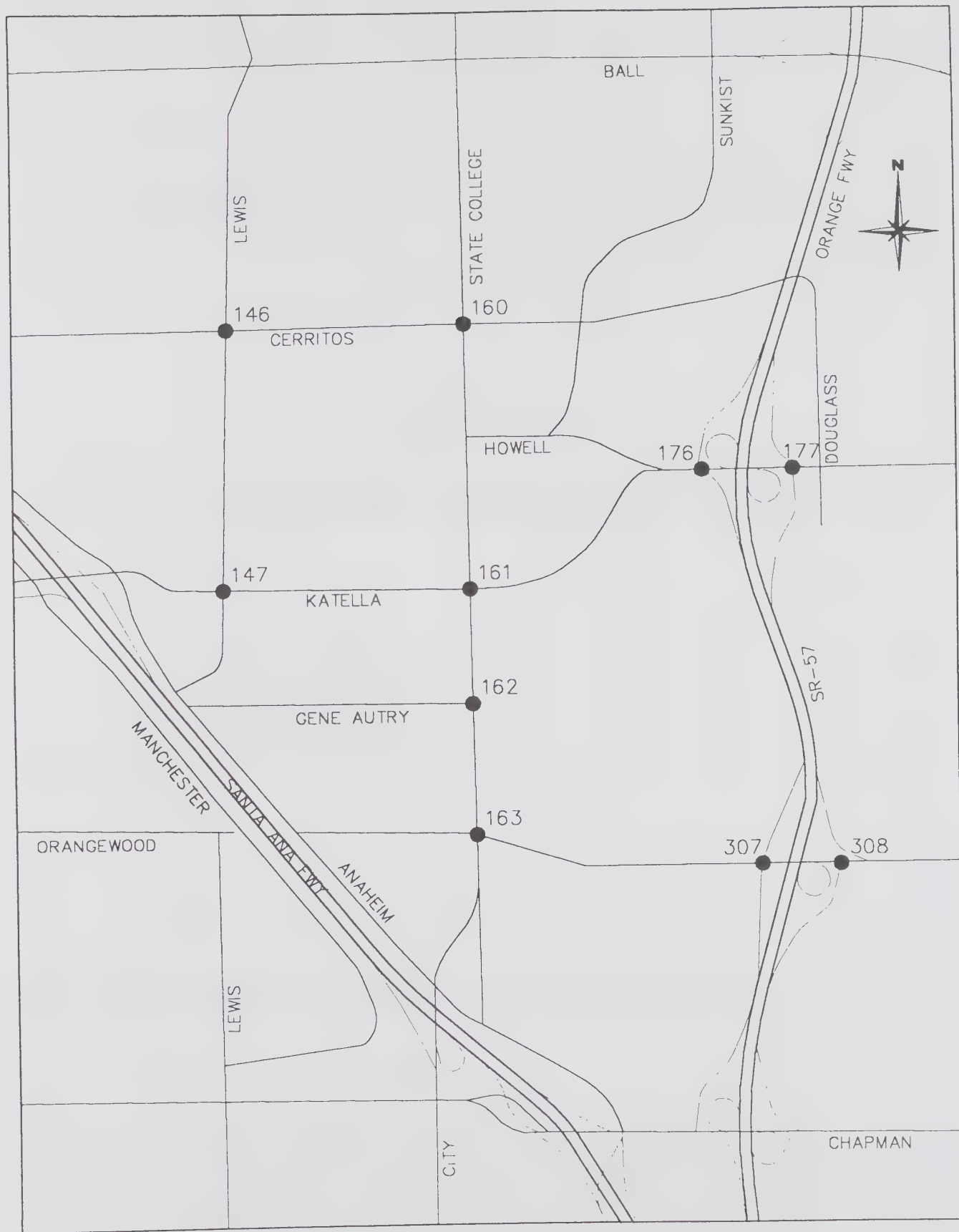
**TABLE 5.2-1
STADIUM AREA MLUP EXISTING ICU SUMMARY**

Intersection	A.M. Peak Hour	P.M. Peak Hour
146. Lewis & Cerritos	0.25	0.31
147. Lewis & Katella	0.39	0.48
160. State College & Cerritos	0.46	0.51
161. State College & Katella	0.50	0.60
162. State College & Gene Autry	0.38	0.35
163. State College & Orangewood	0.52	0.58
176. SR-57 SB Ramps & Katella	0.46	0.45
177. SR-57 NB Ramps & Katella	0.44	0.43
307. SR-57 SB Ramps & Orangewood	0.48	0.55
308. SR-57 NB Ramps & Orangewood	0.50	0.34
Level of service ranges: .00 - .60 A .61 - .70 B .71 - .80 C .81 - .90 D .91 - 1.00 E Above 1.00 F		
Source: Austin-Foust Associates, Inc., January 1996.		

Anaheim Traffic Analysis Model Assumptions

As previously noted, the traffic analysis for the proposed MLUP was conducted using the Anaheim Traffic Analysis Model (ATAM). This model is a computerized trip generation assignment and distribution tool that evaluates various land use and circulation system schemes. This model does not include any special treatment for transit or other transportation demand management (TDM) strategies other than that implicit in the Institute of Transportation Engineers (ITE) trip generation rates. Therefore, the results of the ATAM for this traffic project would be conservative if any substantial portion of the contemplated regional transit and/or transportation demand management (TDM) plans are implemented. These plans include:

1. Orange County Major Investment Study for Urban Rail, Enhanced Bus, Transportation Systems Management, Freeway/Roadway (HOV), or No Build
2. Orange County Commuter Rail Study
3. SR-91 Freeway Widening and HOV Lanes
4. SR-57 Freeway Extension to I-405
5. Transit Way Interchange at Cerritos Avenue and SR-57



SOURCE: Austin-Foust Associates, Inc., August 1998.



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Exhibit 5.2-2 Intersection Location Map

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Future Baseline Traffic Conditions Without Project

Traffic forecasts produced by the ATAM assumes buildout of the City's General Plan, generally considered to be 20 years in the future. The buildout conditions include buildout of the City's land uses as well as the circulation system. Table 5.2-2 below provides an ICU summary of ten intersections within the proposed project site and represents future traffic conditions if the project is not approved. All intersections analyzed are anticipated to function at acceptable levels of service.

**TABLE 5.2-2
GENERAL PLAN BUILDOUT ICU SUMMARY
WITHOUT PROJECT**

Intersection	A.M. Peak Hour	P.M. Peak Hour
146. Lewis & Cerritos	0.52	0.63
147. Lewis & Katella	0.60	0.78
160. State College & Cerritos	0.58	0.72
161. State College & Katella	0.63	0.79
162. State College & Gene Autry	0.78	0.84
163. State College & Orangewood	0.53	0.85
176. SR-57 SB Ramps & Katella	0.52	0.65
177. SR-57 NB Ramps & Katella	0.53	0.64
307. SR-57 SB Ramps & Orangewood	0.76	0.66
308. SR-57 NB Ramps & Orangewood	0.75	0.50
Level of service ranges:		
.00 - .60 A		
.61 - .70 B		
.71 - .80 C		
.81 - .90 D		
.91 - 1.00 E		
Above 1.00 F		
Source: Austin-Foust Associates, Inc., January 1996.		

5.2.2 ENVIRONMENTAL IMPACTS

This section describes the land use and trip generation characteristics associated with the implementation of the MLUP. Additionally, this section describes the forecast future traffic conditions for the project area with development of the MLUP.

Thresholds of Significance

Implementation of the MLUP would have a significant traffic impact if:

- State CMP highway roadways and intersections operate at greater than or equal to a peak hour ICU of 1.0 (LOS E).
- A County or City intersection operates at greater than or equal to a peak hour ICU of 0.90 (LOS D).
- The project increases the deficiency by greater than 0.10 at an intersection which reaches LOS F under base conditions (source: Orange County CMP).

Project Trip Generation

Trip generation rates were obtained from the buildout version of the ATAM. The trips generated by the proposed project are summarized in Table 5.2-3. As compared with existing conditions, the proposed project will increase vehicle trips in the study area by 56,000 trips daily. During the PM peak hour, the proposed project will increase vehicle trips by 6,000 trips.

The ATAM land use database originally assumed buildout of the General Plan development in the study area. The model was then revised to eliminate the General Plan land uses on the site, and was replaced by the square footages of the proposed project to obtain volumes with the proposed project. Traffic was distributed over the buildout circulation system. The buildout circulation system assumes the extension of Gene Autry Boulevard west across the freeways as well as buildout of all arterials to their ultimate widths.

Intersection capacity utilization (ICU) values were calculated based on the proposed project. The with-project ICU values are based on buildout lane configurations and are summarized in Table 5.2-4. The intersections along Katella Avenue will operate at LOS "C" or better during the a.m. and p.m. peak hours. Along State College Boulevard, two intersections (State College Boulevard at Cerritos Avenue and State College Boulevard at Gene Autry Way) will operate at LOS "D" during the p.m. peak hour, and the remaining intersections along State College Boulevard will operate at LOS "C" or better. The intersections along Orangewood Avenue will operate at LOS "C" or better during the a.m. and p.m. peak hours.

ICU values for the existing project area conditions as well as for the future without project area listed for comparison. As shown in Table 5.2-4, the proposed project improves the level of service at two intersections and worsens the level of service at three intersections. However, all study intersections continue to operate at an acceptable level of service with the proposed project.

TABLE 5.2-3
PROPOSED PROJECT TRIP GENERATION SUMMARY

Land Use	Units	AM Peak Hour			PM Peak Hour			ADT
		IN	OUT	TOTAL	IN	OUT	TOTAL	
Trip Rates								
Industrial ^a		0.49	0.07	0.56	0.09	0.41	0.50	6.97
Office ^a		1.84	0.23	2.07	0.35	1.70	2.05	15.33
Community		0.14	0.08	0.22	2.13	2.13	4.26	50.50
Commercial ^a								
Regional Commercial ^a		0.09	0.05	0.14	1.48	1.48	2.96	35.20
Hotel ^b		0.19	0.22	0.41	0.37	0.29	0.66	9.45
Proposed Project Trip Generation								
Industrial	-491.30 TSF	-241	-34	-275	-44	-201	-246	-3,424
Office	1,871.29 TSF	3,443	430	3,874	655	3,181	3,836	28,687
Community	203.44 TSF	28	16	45	433	433	867	10,274
Commercial								
Regional Commercial	248.58 TSF	22	12	34	368	368	736	8,750
Hotel	1,240 ROOM	236	273	508	459	360	818	11,718
Total ^c		3,489	698	4,186	1,871	4,141	6,011	56,004
^a Per 1,000 square feet (TSF)								
^b Per room								
^c Numbers have been rounded accordingly								
Source: Austin-Foust Associates, Inc., September 1998.								

Exhibit 5.2-3 illustrates buildout-with-project ADT volumes in the study area. Buildout-with-General Plan land uses ADT volumes are illustrated in Exhibit 5.2-4. Comparison of these ADT volumes indicates that the proposed project will increase the ADT volumes slightly along Katella Avenue and State College Boulevard north of Orangewood Avenue, and will decrease ADT volumes slightly along Orangewood Avenue and State College Boulevard south of Orangewood Avenue.

Congestion Management Program

The proposed project must determine the potential impacts to the Congestion Management Program (CMP) network. CMP intersections in the study area are located at Katella Avenue and SR-57 Freeway. The CMP guidelines specify that a project cannot cause CMP locations to operate at LOS "E" or "F."

**TABLE 5.2-4
PROJECT ICU SUMMARY AND COMPARISON**

Intersection	Buildout w/Project		General Plan Buildout		Existing	
	AM	PM	AM	PM	AM	PM
146. Lewis & Cerritos	0.51	0.62	0.52	0.63	0.25	0.31
147. Lewis & Katella	0.41	0.59	0.60	0.78	0.39	0.48
160. State College & Cerritos	0.66	0.84	0.58	0.72	0.46	0.51
161. State College & Katella	0.59	0.80	0.63	0.79	0.50	0.60
162. State College & Gene Autry	0.61	0.83	0.78	0.84	0.38	0.35
163. State College & Orangewood	0.52	0.75	0.53	0.85	0.52	0.58
176. SR-57 SB Ramps & Katella	0.50	0.71	0.52	0.65	0.46	0.45
177. SR-57 NB Ramps & Katella	0.65	0.73	0.53	0.64	0.44	0.43
307. SR-57 SB Ramps & Orangewood	0.68	0.63	0.76	0.66	0.48	0.55
308. SR-57 NB Ramps & Orangewood	0.74	0.48	0.75	0.50	0.50	0.34
Level of service ranges: .00 - .60 A .61 - .70 B .71 - .80 C .81 - .90 D .91 - 1.00 E Above 1.00 F						
Source: Austin-Foust Associates, Inc., January 1996.						

The intersection of SR-57 southbound and Katella Avenue will operate with an ICU value of 0.50 (LOS "A") during the a.m. peak hour and 0.71 (LOS "C") during the p.m. peak hour with the proposed project. The intersection of SR-57 northbound and Katella Avenue will operate with an ICU value of 0.52 (LOS "A") during the a.m. peak hour and 0.75 (LOS "C") during the p.m. peak hour. The proposed project does not cause these two CMP intersections to operate at LOS "E" or "F." Therefore, the project will not have a significant impact on the CMP network.

5.2.3 CUMULATIVE IMPACTS

The study area for cumulative effects to traffic is the area generally bounded by Harbor Boulevard, Ball Road, Main Street, and SR-22. The anticipated ICU values identified in the Buildout With Project ICU Summary Table 5.2-4 above reflects estimated levels of additional development within the City of Anaheim, as well as regional growth outside of the City as well as the proposed development. Therefore, the cumulative traffic ICU values would be the same as those summarized in Table 5.2-4. As indicated in the table, all intersections will operate at an acceptable LOS.



SOURCE: Austin-Foust Associates, Inc., August 1998.



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Exhibit 5.2-4 Year 2010 ADT Volumes (In Thousands) - Without Project

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5.2.4 MITIGATION MEASURES

Construction

Mitigation Measure 2-1. Prior to the issuance of grading permits for each project development forecast to generate 100 or more peak hour trips, as determined by the City Traffic and Transportation Manager utilizing Anaheim Traffic Analysis Model Trip Generation Rates, the property owner/developer shall prepare a trip reduction plan for construction crew vehicles subject to the review and approval of the City Traffic and Transportation Manager, to reduce potential vehicle trips on the road and identify parking locations for construction employees and equipment.

Long-Term

Although no long-term project traffic impacts are identified, the following measures will help reduce the trips to and from the project site:

Mitigation Measure 2-2. Prior to final building and zoning inspection and ongoing during project operation, the property owner/developer shall implement and administer a comprehensive Transportation Demand Management (TDM) program for all employees. Objectives of the TDM program shall be to increase ridesharing and use of alternative transportation modes by guests and provide a menu of commute alternatives for employees to reduce project-generated trips.

A menu of TDM program strategies and elements for both existing and future employee commute options include, but are not limited to, the following:

- Onsite Service. Onsite services, such as the food, retail, and other services be provided.
- Ridesharing. A computer listing of all employee members be developed for the purpose of providing a "matching" of employees with other employees who live in the same geographic areas and who could rideshare.
- Vanpooling. A computer listing of all employees for the purpose of matching numbers of employees who live in geographic proximity to one another and could comprise a vanpool or participate in the existing vanpool programs.
- Transit Pass. Southern California Rapid Transit District and Orange County Transportation Authority (including commute rail) passes be promoted through financial assistance and onsite sales to encourage employees to use the various transit and bus services from throughout the region.
- Commuter Bus. As commuter "express" bus service expands throughout the region, passes for use on these lines may be provided for employees who choose to use this service. Financial incentives for these employees could be provided.

- Shuttle Service. A computer listing of all employees living in proximity to the project be generated, and a local shuttle program offered to encourage employees to travel to work by means other than the automobile. Event shuttle service will be available for the guests.
- Bicycling. A bicycling program be developed to offer a bicycling alternative to employees. Secure bicycle racks, lockers, and showers be provided as part of this program. Maps of bicycle routes throughout the area be provided to inform potential bicyclists of these options. Bicycle lanes will be provided along the internal ring road.
- Rental Car Fleet. A private "fleet vehicle" program be developed to provide employees who travel to work by means other than an automobile with access to automobiles in case of emergency, medical appointments, etc. This service would help employees use alternative modes of transportation by ensuring that they would be able to have personal transportation in the event of special circumstances.
- Guaranteed Ride Home Program. A program to provide employees who rideshare, or use transit or other means of commuting to work, with a prearranged ride home in a taxi, rental car, shuttle, or other vehicle, in the event of emergencies during the work shift.
- Target Reduction of Longest Commute Trip. An incentives program for ridesharing and other alternative transportation modes to put highest priority on reduction of longest employee commute trips.
- Stagger shifts.
- Develop a "compressed work week" program, which provides for fewer work days but longer daily shifts as an option for employees.
- Explore the possibility of a "telecommuting" program that would link some employees via electronic means (e.g., computer with modem).
- Develop a parking management program that provides incentives to those who rideshare or use transit means other than single-occupant auto to travel to work.
- Access. Preferential access to high occupancy vehicles, shuttles, and guests for egress purposes may be provided.
- Financial Incentive for Ridesharing and/or Public Transit. (Currently, federal law provides tax-free status for up to \$60 per month per employee contributions to employees who vanpool or use public transit, including commuter rail and/or express bus pools.)
- Financial Incentive for Bicycling. Employees offered financial incentives for bicycling to work.
- Special "Premium" for the Participation and Promotion of Trip Reduction. Ticket/passes to special events, vacations, etc. offered to employees who recruit other employees for vanpool, carpool, or other trip reduction programs.
- Actively recruit prospective employees residing within a 30-minute commute shed.

- Design incentive program for carpooling and other alternative transportation modes to place highest priority on reduction of longest commute trips.

Mitigation Measure 2-3. Prior to final building and zoning inspections, the property owner/developer shall join and financially participate in a clean fuel shuttle program, if established; and, shall participate in the Anaheim Transportation Network/Transportation Management Association in conjunction with the ongoing operation of the project.

5.2.5 SIGNIFICANT UNAVOIDABLE ADVERSE IMPACTS

No significant impacts are anticipated from project implementation.

5.3 AIR QUALITY

The air quality assessment for the Anaheim Stadium Area MLUP project includes an estimation of both stationary and mobile source emissions associated with construction and operation of the proposed project. The stationary emissions include those from the combustion of natural gas and generation of electricity for onsite use. Mobile emissions are based on the vehicle trips generated by the proposed project at build-out conditions. A microscale analysis was also conducted to estimate the potential for localized air quality impacts in the project area. The impact analysis contained in this section was prepared in accordance with the methodologies provided by the South Coast Air Quality Management District (SCAQMD) in its *1993 CEQA Air Quality Handbook (Handbook)*.

5.3.1 ENVIRONMENTAL CONDITIONS

Regional Setting

The Anaheim Stadium Area MLUP is located within the City of Anaheim in Orange County which is located in the South Coast Air Basin (SCAB or Basin) of California. The 6,600-square mile Basin includes Orange County and the non-desert portions of Los Angeles, Riverside, and San Bernardino Counties. Air quality conditions in the SCAB are under the jurisdiction of the South Coast Air Quality Management District. Both the state and federal governments have established health based Ambient Air Quality Standards (AAQS) for six air pollutants. These pollutants are: carbon monoxide (CO), nitrogen dioxide (NO₂), sulfur dioxide (SO₂), lead (Pb), and PM₁₀ particulate matter. (PM_{2.5} particulate matter has also recently been added to this listing; however, the SCAQMD does not currently have data to document ambient conditions or quantify these emissions. Therefore, PM_{2.5} impacts are omitted from this analysis.) The SCAB does not attain state and federal Ambient Air Quality Standards for four of the six criteria air pollutants. The Basin is in compliance with federal sulfur dioxide and lead standards, but ambient CO, and particulate levels (PM₁₀) reach twice the standards. In addition, SCAB is currently the only area in the country that does not attain the federal nitrogen dioxide standard. However, based on nitrogen dioxide levels meeting the federal standard within the past few years, the SCAQMD is in the process of requesting redesignation. These air contaminants exceed the more stringent State Ambient Air Quality Standards by an even higher margin.

Climate

Regional Conditions

The South Coast Air Basin climate is determined by its terrain and geographical location. The Basin is a coastal plain with connecting broad valleys and low hills. The Pacific Ocean forms the

southwestern border and high mountains surround the rest of the Basin. The region lies in the semi-permanent high pressure zone of the eastern Pacific. The resulting climate is mild and tempered by cool ocean breezes. This climatological pattern is rarely interrupted. However, there do exist periods of extremely hot weather, winter storms, or Santa Ana wind conditions.

The annual average temperature varies little throughout the Basin, ranging from the low to middle 60s, measured in degrees Fahrenheit. With a more pronounced oceanic influence, coastal areas show less variability in annual minimum and maximum temperatures than inland areas. All areas in the Basin have recorded summer temperatures above 100°F in recent years. December is typically the coldest month in this area of the Basin. While winter temperatures rarely get below freezing (especially in more coastal areas), inland areas have recorded minimum temperatures dipping into the 20s.

The majority of annual rainfall in the Basin occurs between November and April. Summer rainfall is minimal and generally limited to scattered thundershowers in coastal regions and slightly heavier showers in the eastern portion of the Basin and along the coastal side of the mountains. The climatological station nearest the site which monitors precipitation is the Anaheim station. Rainfall measured in the Anaheim area in 1994 varied from three inches in February to less than one inch between May and January. Moreover, monthly and yearly rainfall totals are extremely variable.

Even though the Basin has a semi-arid climate, air near the surface is generally moist because of the presence of a shallow marine layer. With very low average wind speeds, there is a limited capacity to disperse air contaminants horizontally. The dominant daily wind pattern is an onshore daytime breeze and an offshore night-time breeze. The typical wind flow pattern fluctuates only with occasional winter storms or strong northeasterly Santa Ana winds from the mountains and deserts northeast of the Basin. Summer wind flow patterns represent worst-case conditions, as this is the period of higher temperatures and more sunlight which result in ozone formation.

During spring and early summer, pollution produced during any one day is typically blown out of the Basin through mountain passes or lifted by warm, vertical currents adjacent to mountain slopes. Air contaminants can be transported 60 miles or more from the Basin by ocean air during the afternoons. From early fall to winter, the transport is less pronounced because of slower average wind speeds and the appearance of drainage winds earlier in the day. During stagnant wind conditions, offshore drainage winds may begin by late afternoon. Pollutants remaining in the Basin are trapped and begin to accumulate during the night and the following morning. A low morning wind speed in pollutant source areas is an important indicator of air stagnation and the build-up potential for primary air contaminants.

With persistent low inversion and cool coastal air, morning fog and low stratus clouds are common. However, 73% sunshine is recorded in Downtown Los Angeles. This is an extremely important

climatological factor considering the role of sunshine in the photochemical smog production process. Cloudy days are less likely in the eastern portions of the Basin and about 25 percent greater along the coast.

The vertical dispersion of air pollutants in the South Coast Air Basin is limited by temperature inversions in the atmosphere close to the earth's surface. Temperature normally decreases with altitude and a reversal of this atmospheric State, where temperature increases with altitude, is called an inversion. The height from the earth to the inversion base is known as the mixing height.

Inversions are generally lower in the nighttime when the ground is cool than during the daylight hours when the sun warms the ground and in turn, the surface air layer. As this heating process continues, the temperature of the surface air layer approaches the temperature of the inversion base causing heating along its lower edge. If enough warming takes place, the inversion layer becomes weak and opens up to allow the surface air layers to mix upward. This can be seen in the middle to late afternoon on a hot summer day when the smog appears to clear up suddenly. Winter inversions typically break earlier in the day, preventing excessive contaminant build-up.

The combination of stagnant wind conditions and low inversions produces the greatest pollutant concentrations. On days of no inversion or high winds speeds, ambient air pollutant concentrations are lowest. During periods of low inversions and low wind speeds, air pollutants generated in urbanized areas are transported predominantly onshore into Riverside and San Bernardino Counties. In the winter, the greatest pollution problems are carbon monoxide and oxides of nitrogen because of extremely low inversions and air stagnation during the night and early morning hours. In the summer, the longer daylight hours and the brighter sunshine combine to cause a reaction between hydrocarbons and oxides of nitrogen to form photochemical smog.

Local Climate

Anaheim is located outside of the marine microclimatic zone and is therefore subject to less coastal cloud and fog during the spring and summer than those areas located more proximate to the ocean. Summers are warmer than along the coast, but cooler than in areas of the Basin located further inland. The annual mean temperature in the Anaheim area is 62°F with little daily or seasonal variation. On rare occasions, temperatures may exceed 100°F or dip below freezing.

Winds in the project area are usually driven by the dominant land/sea breeze circulation system. Regional wind patterns are dominated by daytime on-shore breezes. At night, the wind generally slows and reverses direction traveling toward the ocean. Another important wind regime occurs when a high-pressure center forms over the western United States and creates Santa Ana winds which blow from the northeast and east through the project area.

In the summer, the Santa Ana River Canyon, located to the northeast of the project area, provides a transport route for local ozone to move into the Riverside and San Bernardino County areas. Pollutants originating in Orange County are transported by the daytime on-shore air flow where they react to form ozone some distance from where the primary pollutants are emitted. Exhibit 5.3-1 illustrates local wind patterns. Note that a high percentage of winds are from the southwest.

Regulatory Requirements

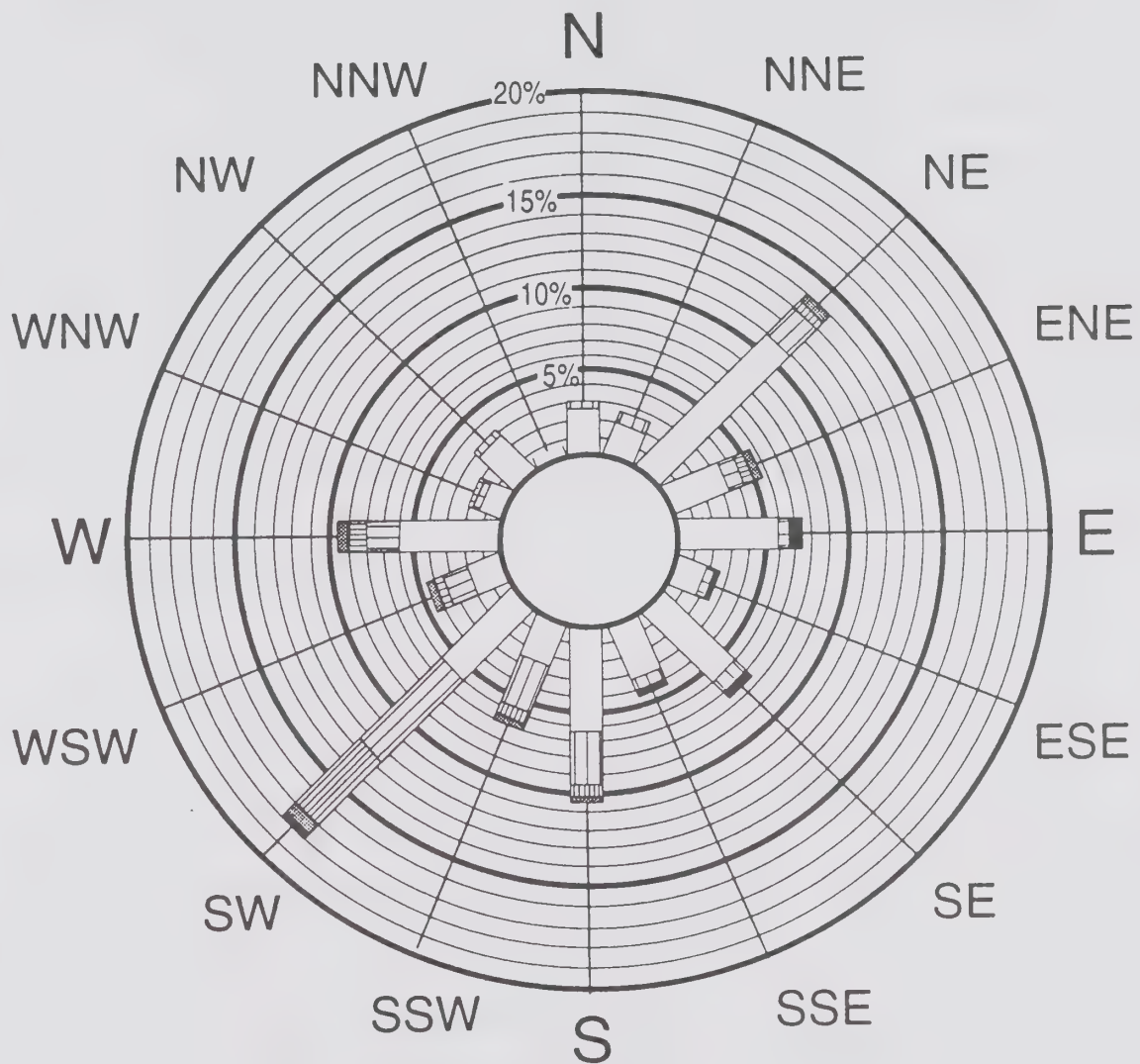
Federal Clean Air Act Requirements

Air quality in the Basin is regulated by federal, State, and regional control authorities. The U.S. Environmental Protection Agency (EPA) is involved in local air quality planning through the Federal Clean Air Act (CAA), as amended by the Clean Air Act Amendments of 1990. The CAA requires plans to provide for the implementation of all reasonably available control measures “as expeditiously as practicable,” including the adoption of reasonably available control technology for reducing emissions from existing sources. Emission control innovations in the form of market-based approaches are explicitly encouraged by the CAA. The SCAQMD is the first local agency in the country to adopt a market-based approach for controlling stationary source emissions of oxides of nitrogen and sulfur and, in accordance with the pending revisions, is proposing additional market-based control measures. Other federal requirements addressed in the revision include mechanisms to track plan implementation and milestone compliance for O₃ and CO.

In addition, the 1990 amendments to the CAA require the SCAQMD to develop the following demonstrations or plans addressed in the 1994 Air Quality Management Plan (AQMP) (discussed below): (1) an ozone attainment demonstration, (2) a post-1996 rate-of-progress demonstration, and (3) a PM₁₀ State Implementation Plan (SIP) (required in 1996) that incorporates best available control measures for fugitive sources.

California Clean Air Act Requirements

In addition to federal requirements, the Basin is subject to requirements set by the State. The California Clean Air Act (CCAA), amended in 1992, requires all air districts in the State to endeavor to achieve and maintain State ambient air quality standards. According to the CCAA, air pollution control districts must design their air quality attainment plans to achieve a reduction in basin-wide emissions of 5 percent or more per year (or 15 percent or more in a 3-year period) for all nonattainment pollutants and their precursors. For emission reduction accounting purposes, the California Air Resources Board (ARB) has established a 7-year initial reporting period (1988 to 1994)



SOURCE: City of Anaheim, 1975.



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Exhibit 5.3-1 Wind Rose at Anaheim (1958-1975)

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with reporting intervals every 3 years thereafter. As a result, the 1994 AQMP must seek to achieve a 35-percent reduction for the initial period and a 15-percent reduction for every subsequent interval.

The CCAA also requires that the 1994 AQMP control measures reduce overall population exposure to criteria pollutants, with a 40-percent reduction due by the end of 1997 and a 50-percent reduction by the year 2000. This provision is applicable to O₃, CO, and NO₂ in the SCAB. The CCAA further requires the SCAQMD's Governing Board to determine that the 1994 AQMP is a cost-effective strategy that will achieve attainment of the State standards by the earliest practicable date. The 1994 AQMP must also include an assessment of the cost-effectiveness of available and proposed measures and a list of the measures ranked from the least cost-effective to the most cost-effective. In addition to cost-effectiveness, other factors must be considered, including technological feasibility, emissions reduction potential, rates of reduction, public acceptability, and enforceability.

Regional Air Quality Management Planning

The SCAQMD and the Southern California Association of Governments (SCAG) are the agencies responsible for preparing the AQMP for the SCAB. Since 1979 a number of AQMPs have been prepared. The most recent comprehensive plan fully approved by the U.S. Environmental Protection Agency (USEPA) is the 1994 Air Quality Management Plan (1994 AQMP), which includes a variety of strategies and control measures. The 1994 AQMP was based on the 1991 AQMP and was designed to comply with State and federal requirements. The goal of the 1994 AQMP was to reduce the high level of pollutant emissions in the SCAB, and ensure clean air for the region. Projected attainment dates for criteria pollutants are presented in Table 5.3-1. To accomplish its task, the AQMP relied on a multilevel partnership of governmental agencies at the federal, State, regional, and local level. These agencies (i.e., the USEPA, ARB, local governments, SCAG, and SCAQMD) are the cornerstones that implement the 1994 AQMP and previous AQMP programs.

TABLE 5.3-1
PROJECTED ATTAINMENT DATES FOR FEDERAL AND STATE AIR
QUALITY STANDARDS FOR THE SOUTH COAST AIR BASIN

Air Pollutant	State	Federal
Nitrogen dioxide (NO ₂)	December 31, 1999	December 31, 1994
Carbon monoxide (CO)	2000 - 2010	December 31, 1999
Ozone (O ₃)	Beyond 2010	December 31, 2009
Particulate matter (PM ₁₀)	Beyond 2010	December 31, 2005
Source: SCAQMD AQMP 1994.		

The AQMP is a dynamic document that is updated every 3 years. The most recent version of the AQMP (1997 Air Quality Management Plan) is currently undergoing EPA review for incorporation as the State Implementation Plan (SIP). The 1997 AQMP is based on the 1994 Plan and carries forward most of the strategies included therein. However, with recent findings by nationally recognized health experts, the new Plan puts greater emphasis on PM₁₀ particulate matter. In fact, the 1997 Plan is the first Plan required by federal law to demonstrate attainment of the federal PM₁₀ ambient air quality standards. The 1997 Plan also updates the demonstration of attainment of ozone and carbon monoxide. Additionally, because the Basin came into attainment of the federal nitrogen dioxide standard since the prior AQMP was prepared, the new Plan includes a maintenance plan to assure continued compliance.

The 1997 AQMP also addresses several State and federal planning requirements and incorporates new scientific data, primarily in the form of updated emissions inventories, ambient measurements, and new air quality models. Expanding on the control strategies included in the 1994 AQMP, the 1997 Plan projects sufficient emissions reductions to meet all federal criteria pollutant standards within the time frames allowed under the Federal Clean Air Act.

The 1997 AQMP also addresses notable regulatory rules promulgated since the preparation of the 1994 Plan. These include the implementation of Phase II reformulated fuels in 1996, the replacement of Regulation XV rideshare program with an equivalent emission reduction program, and new incentive programs for generating emission credits. Other highlights of the 1997 Plan are noted below.

- Use of the most current air quality information (1995), including special particulate matter data from the PM₁₀ Technical Enhancement Program;
- Improved emissions inventories; especially for motor vehicles, fugitive dust, and ammonia sources;
- A similar, but fine tuned overall control strategy with continuing emphasis on flexible, alternative approaches including intercredit trading;
- A determination that certain control measures contained in the 1994 AQMP, are infeasible, most notably the future indirect source measures;
- Enhanced modeling for particulates;
- Separate analyses for the desert portions within the District's jurisdiction: the Coachella Valley within the newly designated Salton Sea Air Basin; and the Antelope Valley within the Mojave Desert Air Basin.
- Attainment to the federal Post-1996 Rate-of-Progress Plan and the Federal Attainment Plans for ozone and carbon monoxide;

- A Maintenance Plan for nitrogen dioxide; and
- An attainment demonstration and State Implementation Plan Revision for PM10.

Air Pollution Constituents

Both the State of California and the federal government have established health based Ambient Air Quality Standards (AAQS) for six air pollutants. As shown in Exhibit 5.3-2, these pollutants include ozone, carbon monoxide, nitrogen dioxide, sulfur dioxide, suspended particulate matter (PM10) and lead. In addition, the State has set standards for sulfates, hydrogen sulfide, vinyl chloride, and visibility reducing particles. These standards are designed to protect the health and welfare of the populace with a reasonable margin of safety.

In addition to primary and secondary ambient air quality standards, the State of California has established a set of episode criteria for ozone, carbon monoxide, nitrogen dioxide, sulfur dioxide, and particulate matter. These criteria refer to episode levels representing periods of short-term exposure to air pollutants which actually threaten public health. Health effects are progressively more severe as pollutant levels increase from Stage One to Stage Three.

Ozone

Ozone (smog) is formed by photochemical reactions between oxides of nitrogen and reactive organic gases rather than being directly emitted. Ozone is a pungent, colorless gas typical of the Southern California type smog. Elevated ozone concentrations result in reduced lung function, particularly during vigorous physical activity. This health problem is particularly acute in sensitive receptors such as the sick, the elderly, and young children. Ozone levels peak during the summer and early fall months.

Carbon Monoxide

Carbon monoxide (CO) is formed by the incomplete combustion of fossil fuels, almost entirely from automobiles. It is a colorless, odorless gas that can cause dizziness, fatigue, and impairments to central nervous system functions. CO passes through the lungs into the blood stream where it interferes with the transfer of oxygen to body tissues.

Nitrogen Oxides

Nitrogen oxides (NO_x) contribute to other pollution problems, including a high concentration of fine particulate matter, poor visibility, and acid deposition. Nitrogen dioxide (NO₂), a reddish-brown gas and nitric oxide (NO), a colorless, odorless gas, are formed from fuel combustion under high

temperature or pressure. These compounds are referred to as nitrogen oxides, or NO_x. NO_x is a primary component of the photochemical smog reaction. NO₂ decreases lung function and may reduce resistance to infection.

Sulfur Dioxide

Sulfur dioxide (SO₂) is a colorless irritating gas formed primarily from incomplete combustion of sulfur-containing fuels. Industrial facilities also contribute to gaseous sulfur dioxide levels in the Basin. Sulfur dioxide irritates the respiratory tract, can injure lung tissue when combined with fine particulate matter, and reduces visibility and the level of sunlight.

Reactive Organic Gases

Reactive Organic Gases (ROG) are formed from combustion of fuels and evaporation of organic solvents. ROG is a prime component of the photochemical smog reaction. Consequently, ROG accumulates in the atmosphere more quickly during the winter when sunlight is limited and photochemical reactions are slower.

Particulate Matter

Particulate matter (PM₁₀) refers to small suspended particulate matter with an aerodynamic diameter of 10 microns or less which is not readily filtered out by the lungs. Nitrates and sulfates, as well as dust particulates, are major components of PM₁₀. These small particles can be directly emitted into the atmosphere as by-products of fuel combustion, through abrasion, such as tire or brake lining wear, or through fugitive dust (wind or mechanical erosion of soil). They can also be formed in the atmosphere through chemical reactions. Particulates may transport carcinogens and other toxic compounds that adhere to the particle surfaces, and can enter the human body through the lungs.

Local Air Quality

The site is located within the northeastern-most portion of Source/Receptor Area (SRA) 17 (Central Orange County), one of 32 monitored areas under SCAQMD jurisdiction. The communities within an SRA are expected to have similar climatology and subsequently, similar ambient air pollutant concentrations. The most current 5 years of data monitored at the Anaheim monitoring station located within this area are included in Table 5.3-2.

These data show recurring violations of both the State and federal the hourly standards for ozone (O₃). Additionally, one first stage smog alert (≥ 0.20 ppm ozone for an hourly exposure) was noted in 1994 at this station. While the summer ozone levels are occasionally unhealthful for all receptor

California

National ^b

Air Pollutant	Concentration ^a	Primary(>)	Secondary(>)
Ozone	0.09 ppm, 1-hr. avg.	0.12 ppm, 1-hr. avg.	0.12 ppm, 1-hr. avg.
Carbon Monoxide	9.0 ppm, 8-hr. avg. 20 ppm, 1-hr. avg.	9.5 ppm, 8-hr. avg. 35 ppm, 1-hr. avg.	9.5 ppm, 8-hr. avg. 35 ppm, 1-hr. avg.
Nitrogen Dioxide	0.25 ppm, 1-hr. avg.	0.053 ppm, annual avg.	0.053 ppm, annual avg.
Sulfur Dioxide	0.05 ppm, 24-hr. avg. ^c	0.03 ppm, annual avg. 0.14 ppm, 24-hr. avg.	0.50 ppm, 3-hr. avg.
Suspended Particulate Matter (PM 10)	30 ug/m ³ annual geometric mean 50 ug/m ³ , 24-hr. avg.	50 ug/m ³ , annual arithmetic mean 150 ug/m ³ , 24-hr. avg.	50 ug/m ³ , annual arithmetic mean 150 ug/m ³ , 24-hr. avg.
Sulfates	25 ug/m ³ , 24-hr. avg.		
Lead	1.5 ug/m ³ , 30-day avg.	1.5 ug/m ³ , calendar quarter	1.5 ug/m ³ , calendar quarter
Hydrogen Sulfide	0.03 ppm, 1-hr. avg.		
Vinyl Sulfide	0.010 ppm, 24-hr. avg.		
Visibility Reducing Particles	In sufficient amount to reduce the prevailing visibility to less than 10 miles at relative humidity less than 70%, 1 obs.		

- a) California standards for ozone, carbon monoxide (except Lake Tahoe), sulfur dioxide (1-hour), nitrogen dioxide, suspended particulate matter-PM₁₀, visibility reducing particles, are values that are not to be exceeded. The sulfur dioxide (24-hour), sulfates, Lake Tahoe carbon monoxide, lead, hydrogen sulfide, and vinyl chloride standards are not to be equaled or exceeded.
- b) National standards, other than ozone and those based on annual averages or annual arithmetic means, are not to exceed more than once a year. The ozone standard is attained when the expected number of days per calendar year with maximum hourly average concentrations above the standard is equal to or less than one.
- c) At locations where the state standards for ozone and/or total suspended particulate matter are violated, National standards apply elsewhere.

Note: ppm = parts per million by volume.
ug/m³ = micrograms per cubic meter.

Source: California Air Resources Board, 1991.



Michael Brandman Associates

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Exhibit **5.3-2**
Ambient Air Quality Standards

ANAHEIM STADIUM AREA MASTER LAND USE PLAN EIR

populations, they are lower than inland communities. PM10 levels also exceed California Ambient Air Quality Standards on a fairly regular basis. Levels of primary automobile pollutants, such as CO, have not exceeded their standards in the last 5 years. The data, in general, shows that improvement has occurred throughout the 1990s. However, desirable levels have not been attained for some pollutants.

TABLE 5.3-2
AMBIENT AIR QUALITY MONITORING SUMMARY
FOR THE ANAHEIM MONITORING STATION
(Number of Days Standards Were Exceeded and
Maximum Levels During Such Violations)

Pollutant/Standard	1993	1994	1995	1996	1997
Ozone					
State 1-Hour ≥ 0.09 ppm	23	24	19	9	1
Federal 1-Hour > 0.12 ppm	3	5	2	1	1
Federal 8-Hour > 0.08 ppm	NM ¹	NM	NM	NM	0
Max. 1-Hour Conc. (ppm)	0.17	0.21	0.13	0.13	0.10
Max. 8-Hour Conc. (ppm)	NM	NM	NM	NM	0.08
Carbon Monoxide					
State 1-Hour > 20 ppm	0	0	0	0	0
State 8-Hour > 9.1 ppm	0	0	0	0	0
Max 1-Hour Conc. (ppm)	15	12	10	9	8
Max. 8-Hour Conc. (ppm)	7.7	8.6	8.0	7.5	5.8
Nitrogen Dioxide					
State 1-Hour ≥ 0.25 ppm	0	0	0	0	0
Max. 1-Hour Conc. (ppm)	0.20	0.19	0.18	0.15	0.13
Inhalable Particulates (PM10)					
State 24-Hour $> 50 \mu\text{g}/\text{m}^3$ ²	21.3	18.0	23.3	10.0	18.3
Federal 24-Hour $> 150 \mu\text{g}/\text{m}^3$ ²	0	0	1.7	0	0
Max. 24-Hour Conc. ($\mu\text{g}/\text{m}^3$)	92	106	172	101	91
¹ NM - Not monitored.					
² Percent of samples exceeding standard.					
Source: SCAQMD AQMP 1994.					

5.3.2 ENVIRONMENTAL IMPACTS

The potential air quality impacts of the proposed project have been analyzed using emission factors developed by the SCAQMD, the ARB, and the EPA. Short-term air quality impacts from exhaust and ROG emissions may result from the use of heavy equipment, worker vehicles and haul trucks, as well

as the application of architectural coating and asphalt. PM10 impacts associated with airborne dust may occur during site grading and soil movement.

Long-term impacts are typically associated with the subsequent site occupancy and include stationary sources associated with the generation of electricity for onsite use, the combustion of natural gas for space and water heating, and ROG from the use of consumer products such as aerosol sprays. However, the greatest source of operational impacts typically stems from the use of project-related vehicles. These impacts not only add to the daily pollutant loading in the Basin, but also have the potential to create localized CO concentrations called “hot spots.”

Thresholds of Significance

Section 15002(g) of the state CEQA Guidelines defines a significant effect on the environment as “a substantial adverse change in the physical conditions which exists in the area affected by the proposed project.” In order to determine whether or not the proposed project would cause a significant effect on the environment, the impact of the project must be determined by examining the types and levels of emissions generated and its impacts on factors that affect air quality. To accomplish this determination of significance, the SCAQMD has established air pollution thresholds against which a proposed project can be evaluated and assist lead agencies in determining whether or not the proposed project is significant. If the thresholds are exceeded by a proposed project, then it should be considered significant.

While, the final determination of whether or not a project is significant is within the purview of the lead agency pursuant to Section 15064(b) of the State CEQA Guidelines, the SCAQMD recommends that two types of air pollution thresholds be used by lead agencies in determining whether the operational phase of a proposed project is significant. If the lead agency finds that the proposed project has the potential to exceed either of the air pollution thresholds, the project should be considered significant. These threshold factors are individually discussed below.

Construction Phase - Thresholds of Significance

Separate threshold standards have been recommended for assessing construction-term impacts, which are averaged over a 3-month period to include only actual working days. The following significance thresholds for air quality have been established by the SCAQMD on a daily basis for construction emissions:

- 75 pounds per day for ROG
- 100 pounds per day for NO_x
- 550 pounds per day for CO

- 150 pounds per day for PM10
- 150 pounds per day of SO_x

The following significance thresholds for air quality have been established by the SCAQMD on a quarterly basis for construction emissions:

- 2.5 tons per quarter of ROG
- 2.5 tons per quarter of NO_x
- 24.75 tons per quarter of CO
- 6.75 tons per quarter of PM10
- 6.75 tons per quarter of SO_x

During construction, if any of the identified daily or quarterly air pollutant thresholds are exceeded by the proposed project, then the project's air quality impacts may be considered significant.

Operational Phase - Thresholds of Significance (Primary Effects)

Specific criteria air pollutants have been identified by the SCAQMD as pollutants of special regional concern. Based upon this categorization, the following significance thresholds for operational emissions have been established by the SCAQMD for project operations:

- 55 pounds per day of ROG
- 55 pounds per day of NO_x
- 550 pounds per day of CO
- 150 pounds per day of PM10
- 150 pounds per day of SO_x

Projects within the SCAB with daily operation-related emissions that exceed any of the above emission thresholds may be considered significant.

The SCAQMD indicated in Chapter 6 of their *Handbook*, that they consider a project to be mitigated to a level of insignificance if its primary effects are mitigated below the thresholds provided above.

Operational Phase - Thresholds of Significance (Secondary Effects)

The SCAQMD recommends that "additional indicators" should be used as screening criteria with respect to air quality. Relevant additional factors identified in the *Handbook* include the following significance criteria:

- interference with the attainment of the federal or State ambient air quality standards by either violating or contributing to an existing or projected air quality violation
- generation of vehicle trips that cause a CO “hot spot”
- creation of (or subject receptors to) an objectionable odor over 10 dilution to thresholds
- introduction of hazardous materials on-site which could result in an accidental release of air toxic emissions or acutely hazardous materials posing a threat to public health and safety
- emission of an air toxic contaminant regulated by SCAQMD rules or included on a federal or State air toxic list
- involve the burning of hazardous, medical or municipal waste as waste-to-energy facilities
- emission of carcinogenic or toxic air contaminants that individually or cumulatively exceed the maximum individual cancer risk of 10 in 1 million.

The SCAQMD indicates in Chapter 6 of their *Handbook*, that they consider a project to be mitigated to a level of insignificance if its secondary effects are mitigated below the thresholds provided above.

Short-term Construction Impacts

Air quality impacts may occur during the site preparation and construction activities required to construct the proposed land uses. Major sources of emissions during this phase include exhaust and ROG emissions generated during site preparation, subsequent construction and fugitive dust generated from soil disturbances during excavation activities.

These emissions are quite variable in time and space and differ considerably among various construction projects. Such emission levels can therefore, only be approximated. The CARB recently released the URBEMIS7 computer model (August 1998) which includes both construction and operational emissions. The URBEMIS7 model sets default values for construction equipment operations and disturbed area as well as worker trips, and the use of asphalt and architectural coatings. Model inputs include the projected types of land uses and their square footage areas, the length of the construction period, and the year in which construction is to begin. For the purposes of this analysis, construction is slated to begin in the year 1999 and is projected to be built out in the year 2015. Thus, construction is expected to take place over a period of 15 years with construction occurring 250 days per year as per the model default. Daily emissions by construction activity are included in Table 5.3-3. Model results are included in the Appendix. Note that in accordance with the URBEMIS7 model, NO_x emissions will exceed their criterion value. Furthermore, ROG emissions produced during painting operations may also exceed their criterion presenting a potentially significant impact. Because this analysis includes the construction of 126,862 square feet of industrial uses rather than the 618,165 square feet included in the current general plan, construction emissions would actually be

lower than if the area were to be built out under the current General Plan. Still construction emissions are projected to create a potentially significant air quality impact.

TABLE 5.3-3
CONSTRUCTION EMISSIONS
(lb/day)¹

Description	CO	NO _x	ROG	PM ₁₀
Site Grading ²	39.8	126.3	11.1	108.4
Worker Trips ³	20.5	10.8	7.6	2.1
Stationary Equipment ⁴	NV ⁵	3.0	3.7	0.2
Mobil Equipment ⁶	204.2	477.4	30.1	29.5
Architectural Coatings ⁷			284.2	
Asphalt Offgassing ⁸			1.1	
Total	264.5	617.5	337.8	140.2
SCAQMD Daily Threshold	550	100	75	150
Exceeds Threshold?	No	Yes	Yes	No

¹ Includes standard mitigation measures such as twice daily watering, maintaining a speed limit of 15 mph on unpaved roads, equipment maintenance, and the use of low volatile coatings for painted and asphalt surfaces.

² Includes four motor graders, four track loaders, and four wheel loaders each operating 8 hours per day. Also includes PM₁₀ associated with the grading of as much as 33.8 acres per day. CO is not predicted by URBEMIS7 and is derived from Table A9-8-A of the SCAQMD *Handbook*.

³ Worker trips include 0.32 trips per 1,000 square feet for commercial and 0.42 trips per square foot for office and industrial land uses.

⁴ Includes 22 pieces of equipment per day.

⁵ NV - No value predicted by URBEMIS7 model however, resultant value would not change outcome of this analysis.

⁶ Includes 11 off-highway trucks and 11 heavy-duty forklifts each operating 8 hours per day. CO is not predicted by URBEMIS7 and is derived from Table A9-8-A of the SCAQMD *Handbook*.

⁷ Includes emissions per day and assumes that painting occurs over 300 days.

⁸ Includes emissions per day and assumes that paving occurs over 150 days.

Source: Michael Brandman Associates 1998.

Long-term Regional Impacts

Operational impacts could result from direct emissions from the use of onsite utilities associated with the proposed land uses as well as local and regional vehicle emissions from employee, visitor, and service vehicles traveling both to and from the project site. The SCAQMD significance thresholds discussed previously were used to assess the potential significance of these operational impacts.

As with construction, regional impacts were projected using the URBEMIS7 computer model. The model projects emissions associated with both project-generated vehicles as well as stationary sources

including the use of natural gas, landscape maintenance, and consumer products (e.g., aerosol sprays). The model does not include emissions associated with the generation of electricity and these emissions were predicted in accordance with Tables A9-11-A and A9-11-B of the SCAQMD *Handbook*. In accordance with Table A9-11-A of the *Handbook*, hotels consume 9.95 kilowatt-hours (kwh) per square foot per year. Assuming that the 1,240 rooms projected for hotel use average 600 square feet (to include lobbies, conference rooms, etc.), the hotel space is estimated at 744,000 square feet and electrical use is estimated at 7,402,800 kwh per year or 20,282 kwh per day. Retail land uses consume 13.55 kwh per square foot per year and the proposed 452,020 feet of commercial area are projected to use an additional 16,780 kwh per day. Office uses consume electricity at a rate of 12.95 kwh per year and the proposed 1,871,290 square feet are estimated to use 66,392 kwh per day. Finally, the 126,860 square feet associated with industrial use are estimated to use 10.50 kwh per square foot per year or 3,649 kwh per day. In all, the project is then projected to use approximately 107,103 kwh per day. The emissions associated with the generation of this electricity are included in Table 5.3-4.

As noted, the URBEMIS7 model includes emissions for vehicle trips based on specific land use types. The model does not include the level of detail as included in the ITE Trip Generation Manual and for this reason, the number of trips associated with each type of land use were modified to reflect those values presented in the Austin-Foust Associates Traffic Study. All other model parameters were set at default values specific to the South Coast Air Basin. Model results are included in Table 5.3-3. Model parameters are included in the Appendix. Note that all modeled criteria pollutant species are expected to exceed their respective daily thresholds resulting in a potentially significant impact.

TABLE 5.3-4
OPERATIONAL EMISSIONS
(lbs/day)

	CO	NO _x	ROG	PM10
URBEMIS7 EMISSIONS ¹	2,811.6	910.6	285.9	443.3
Electrical Generation	21.4	123.2	1.1	4.3
Total	2,833.0	1033.8	287.0	447.6
SCAQMD Daily Threshold	550	55	55	150
Exceeds Threshold?	Yes	Yes	Yes	Yes
¹ Includes vehicle travel, the use of natural gas, landscape maintenance equipment, and consumer products.				
Source: Michael Brandman Associates 1998.				

Long-term Local Impacts

An impact is also potentially significant if emissions levels exceed the State or Federal Ambient Air Quality Standards. Because CO is produced in greatest quantities from vehicle combustion and does

not readily disperse into the atmosphere, adherence to ambient air quality standards is typically demonstrated through an analysis of localized CO concentrations. Areas of vehicle congestion have the potential to create “pockets” of CO called “hot spots.” These pockets have the potential to exceed the State 1-hour standard of 20 ppm or the 8-hour standard of 9.0 ppm. Note that the federal levels are based on 1- and 8-hour standards of 35 and 9 ppm, respectively. Thus, an exceedance condition will occur based on the State standards prior to exceedance of the federal standard.

As noted in the CO Protocol, the EMFAC7G and CALINE4 models are sensitive to the volumes of trucks on the roadway as they contribute disproportionately to the pollutant loading. The ratio of all classes of vehicles (e.g., automobiles, trucks, busses, motorcycles) in the project area was derived from a year 2015 model run of the BURDEN7G computer model. BURDEN7G also projects area-wide CO emissions both for starts and running vehicles. The projected start emissions for each of the vehicle classes was divided by the total number of starts for each class so that an average start emission factor could be derived for each class. In accordance with the CO Protocol, a central business district would have between 25 and 40 percent of its vehicles in “start mode” during the p.m. peak hour and 15 to 25 percent in start mode during the course of the day. For this analysis an average value of 32.5 percent of the vehicles were assumed in start mode. These emissions were then added to the emissions produced in the “run mode” as projected by the EMFAC7G model and composite emissions were produced for any vehicle speed between 5 and 35 mph extrapolated into 1 mph increments.

Per the protocol, the intersection mode of the CALINE4 model is not to be used and intersections are modeled by using a reduced speed (and its attendant increase in emissions) to represent intersection speeds and waits. For the purposes of this analysis, vehicles emissions were projected within 500 meters (1,640 feet) of the intersection. The first 419 meters (1,374 feet) were assumed in cruise mode with an average speed of 30 mph as directed by the CO Protocol for urban traffic. The slowing period then lasted for 87 meters (285 feet). This value was derived by calculating the time it would take for a vehicle to slow from 30 mph at a rate of 4.6 mph/sec (per the CALINE4 user manual) and doubling this distance to account for any vehicles which had already stopped at the intersection. Vehicles leaving the intersection were assumed accelerate at a rate of 3.3 mph/sec) again per the CALINE4 user manual) until they again reached a cruise speed of 30 mph. This distance calculates out to 61 meters (200 feet). Emissions for these departing vehicles were then considered to be in cruise mode out to a distance of 500 meters.

The speed while in slowing and accelerating modes (and their attendant emissions) are determined by the protocol and consider the number of vehicles per lane and percent of time that the traffic signal is red. Because future intersection stoplight timing is unknown, the percentage of red time was modeled as being inversely proportional to the projected volume of vehicles. Thus, if the north and south-bound traffic constituted 70 percent of the total volume, they were allotted 30 percent of the “red

time.” In all cases the “red time” was rounded to the nearest 10 percent and was never allotted a value of greater than 70 percent of the total time.

Also as noted in the CO Protocol, vehicle emissions are sensitive to the ambient temperature. Per the protocol, ambient temperature is to be set at 2°C (5°F) above the typical winter temperature. As per the climatology discussion above, the project area seldom gets below freezing. Thus, an ambient temperature of 5°C (40°F) was used in the both the EMFAC7G and CALINE4 model runs. Other atmospheric conditions used in the CALINE4 model include the minimum allowable wind speed (0.5 meters per second) with a standard deviation of 10 percent, a stability class of G, a mixing height of 1,000 meters, and a ground surface roughness of 108 cm (43 in); all indicative of a worst-case scenario in an urban setting.

Projected composite emissions were then used as data in the CALINE4 model to project CO emissions at a distance of 15 meters (50 feet) from each of the four corners of the intersection. To these values an ambient concentration of CO was added. The 1- and 8-hour ambient concentrations were based on Tables 5-2 and 5-3 of the SCAQMD *Handbook* for projected Year 2000 concentrations (the last year presented) in the Anaheim area. Year 2015 ambient concentration would be expected to be lower further reducing projected emissions at modeled intersections.

Because traffic congestion is highest at intersections where vehicles queue and are subject to reduced speeds, these hot spots are typically produced at intersection locations. Typically, the level of service (LOS) at an intersection producing a hotspot is at D or worse during the peak hour. Only two intersections in the project area are projected to operate at an LOS D and none are projected to operate at LOS E or F. The two intersections projected to operate at LOS D include State College and Cerritos and State College and Gene Autry. As indicated in Table 5.3-5, neither of these intersections is projected to result in an exceedance of either the 1- or 8-hour CO standards either without or with project implementation. (Note that only the highest value of the four corners of the intersection is presented in the table.) As all other intersections within the project area are projected to operate at LOS C or better, none of these would be projected to result in exceedance of the CO standards and no further modeling is necessary.

TABLE 5.3-5
PROJECTED CO CONCENTRATIONS AT MAJOR
INTERSECTIONS IN THE PROJECT AREA

Intersection	Volume Without Project (ADT)	LOS	CO @ 50 Feet ¹	Volume With Project (ADT)	LOS	CO @ 50 Feet ¹
State College & Cerritos	4,740	C	11.3/6.8	5,040	D	11.5/6.9

TABLE 5.3-5 (continued)

Intersection	Volume Without Project (ADT)	LOS	CO @ 50 Feet ¹	Volume With Project (ADT)	LOS	CO @ 50 Feet ¹
State College & Cerritos	5,820	D	11.4/6.8	5,370	D	11.3/6.8
¹ As measured at a distance of 50 feet from the corner of the intersection predicting the highest value. CO based on 1-hour/8-hour concentrations, respectively. Includes background concentrations of 9.5 and 5.5 ppm for 1- and 8-hour concentrations, respectively. Eight-hour concentrations based on a persistence of 0.7 of the 1-hour concentration.						
Source: Michael Brandman Associates 1998.						

Consistency With The AQMP

CEQA requires that projects be consistent with the AQMP. A consistency determination plays an essential role in local agency project review by linking local planning and uniquely individual projects to the AQMP in the following ways. It fulfills the CEQA goal of fully informing local agency decision-makers of the environmental costs of the project under consideration at a stage early enough to ensure that air quality concerns are fully addressed. And, it provides the local agency with ongoing information assuring local decision-makers that they are making real contributions to clean air goals contained in the AQMP. Only new or amended General Plan elements, Specific Plans, and significant projects need to undergo a consistency review. This is because the AQMP strategy is based on projections from local General Plans. Therefore, projects that are consistent with the local General Plan are considered consistent with the air quality-related regional Plan. The Proposed Project will require a General Plan Amendment and therefore a consistency determination is necessary.

There are two key indicators of consistency with the AQMP. The first is whether the project will not result in an increase in the frequency or severity of existing air quality violations or cause or contribute to new violations, or delay timely attainment of air quality standards or the interim emissions reductions specified in the AQMP. The second is whether the project will exceed the assumptions in the AQMP in 2010 or increments based on the year of project build-out and phase.

The first of these indicators (i.e., will the project result in an increase in the frequency or severity of existing air quality violations or cause or contribute to new violations) is addressed through the CO modeling performed at major intersections in the project area. As demonstrated above, the project does not produce significant CO impacts and therefore is in compliance with this first indicator.

The second indicator is addressed by determining whether the project is consistent with the assumptions included in the AQMP for the year 2010. Emissions projections within the AQMPs are

based on emissions associated with base-line conditions and adds those emissions associated with the increase in employment as well as demographic data. Therefore, if development in the project area has been considered in the AQMP, the project will generally be found to be consistent with the Plan.

The AQMP estimates that the population within the four-county area will grow from its 1994 level of 13.8 million to 16.7 million in 2010 yielding a growth of 2.9 million or a 21 percent growth rate for this period (Table 2-5, Page III-2-12).

In contrast to the growth in population, the AQMP estimates that the number of jobs will increase from 6 million to 8.0 million or 33 percent while housing will increase from 4.8 million to 5.7 million units or 19 percent over this same period. Thus, if one were to consider the jobs/housing ratio, the current AQMP projects 1.4 jobs per household.

In the past, the AQMP (1991 AQMP) focused on this job/housing ratio with the understanding that as areas are balanced, these jobs could be filled by the local population. Ideal ratios were as projected in the Growth Management Plan (1989) and an area was considered to be in balance if the projected jobs/housing ratio was projected at 1.22 in 2010. (The northwestern Orange County area was considered to be among the more jobs rich/housing poor areas with a projected jobs/housing balance of 1.44 in the year 2010. Furthermore, the Regional Comprehensive Plan [1994] projected a 2010 jobs/housing balance of 1.73 for Orange County.) Ideally, each city in the greater Southern California area would attain the overall balance reducing the need for extended commuter trips. This however is not practical due to the locations of employment centers and housing areas which tend to be grouped as a result of zoning ordinances as well as budgetary and practical constraints. Furthermore, a balance of jobs to housing does not ensure that those jobs are filled by local residents.

The 1994 AQMP recognized this and focused on reduction in vehicle trips through transportation control measures, alternatives to vehicle use, and desirability of mixed land use areas. The 1997 Plan carries forward the goals of the 1994 Plan.

The goal of the MLUP is to ensure the orderly development of the Stadium site and surrounding area. While the MLUP will not change existing land uses, it will ensure continuity of any subsequent development. These goals of the MLUP are intended to be an important basis for future land use and other policy decisions for the project area. Of relevance to the consistency analysis presented here is the goal to create a unique, integrated pedestrian oriented, sports entertainment urban attraction. The project, which includes entertainment, retail, offices, and hotels, serving visitors to the project area in conjunction with other City attractions, such as Disneyland, the Convention Center, the Stadium, and the Pond, would facilitate longer stays in the area, less regional travel, and fewer starts associated with private automobiles, as all noted attractions are either within walking or shuttle distance of each other. The presence of local restaurants and commercial shopping, as well as a unified theme and public

program of visual enhancements further facilitate pedestrian activity. The Anaheim Stadium Area MLUP therefore shares many of the VMT characteristics analyzed in the Disneyland Resort EIR and The Anaheim Resort EIR, which found that these project's designs would result in longer stays and fewer regional vehicular trips and VMT for future visitors. Therefore, the MLUP is consistent with the goals of the AQMP by contributing to a reduction in overall regional vehicle miles traveled.

Another important aspect of the MLUP is the removal of 491,303 square feet of industrial use. Based on projected trip generation values, this decrease will remove 3,424 daily trips through the project area. As industrial-type land uses are not as amenable to trip reduction measures (such as shuttles) as the proposed land uses within the MLUP, this reduction also ties into the goals of the AQMP.

Finally, while the project does require a General Plan Amendment to permit the type of development currently proposed and to update development standards for the subject property, the proposed development is generally in keeping with other local development as well as the projections for local build out. As such, the project is considered to be consistent with the AQMP and does not present a significant impact in this respect.

5.3.3 CUMULATIVE IMPACTS

In accordance with the SCAQMD methodology, any project that produces a significant air quality impact in an area that is out of attainment adds to the cumulative impact, and this cumulative impact is considered potentially significant. The project area is out of attainment of the State Ambient Air Quality Standards for both ozone and PM₁₀ particulate matter. Construction and operation of cumulative projects will further degrade the local air quality, as well as the air quality of the South Coast Air Basin. Air quality will be temporarily degraded during construction activities that occur separately or simultaneously. However, the greatest cumulative impact on the quality of regional air cell will be the incremental addition of pollutants mainly from increased traffic from residential, commercial, and industrial development.

Mitigation measures for the Project, presented in Section 5.3.4, will aid in mitigating these cumulative impacts to the extent feasible and can be applied to all similar cumulative projects. Mitigations for projects involving the use of diesel equipment and trucks include the stipulation that all vehicles and equipment being kept in a proper state of tune, catalytic converters be used on all gasoline-powered equipment, low-emission diesel fuel be used, and diesel engines be substituted by electric or gasoline engines where feasible. Additionally, internal combustion engines should not be left idling for prolonged periods and construction should be curtailed on high smog days. At least twice daily watering of active construction areas and dirt roads will be required to reduce fugitive dust. With the inclusion of these measures, impacts are reduced, but projected to remain significant.

Mitigations for residential/commercial/industrial developments will primarily come from traffic congestion management and other regional air quality strategies. While the overall effectiveness of the mitigation measures discussed below is still likely to be limited, their aggressive adoption will at least attempt to reduce the overall air quality burden.

With respect to cumulative impacts to ambient air quality standards, the traffic analysis prepared by Austin-Foust Associates and analysis presented in Table 5.2-4 includes the composite CO emissions generated by existing, plus related project, plus project-generated traffic. Thus, the analysis includes the cumulative CO levels and as noted above, the project does not present a cumulative impact in this respect.

5.3.4 MITIGATION MEASURES

Mitigation Measure 3-1. Depending on the level of construction conducted at any one time, NO_x emissions could exceed daily and quarterly threshold levels and mitigation is warranted to reduce these emissions to the extent reasonably feasible. Furthermore, ROG emissions released during the application of paints and coatings could also exceed daily criterion levels. Because painting would be carried out at various stages of project development, it is doubtful that quarterly ROG emission thresholds would be exceeded.) The following measures will reduce these emissions, however, the resultant value is expected to remain significant.

- a. All construction equipment shall be maintained in good operating condition so as to reduce operational emissions. The contractor will ensure that all construction equipment is being properly serviced and maintained.
- b. Prior to construction, the contractor will provide evidence that low emission mobile construction equipment will be utilized, or that their use was investigated and found to be infeasible for the project.
- c. The contractor shall utilize existing power sources (e.g., power poles) or clean-fuel generators rather than temporary power generators where feasible.

Mitigation Measure 3-2. While the analysis of construction impacts notes that PM₁₀ levels associated with equipment use and fugitive dust will not exceed the daily or quarterly criteria, the URBEMIS7 model bases its estimate of an area of 33.7635 acres per day and includes twice daily watering of both the construction site and unpaved haul roads. Furthermore, the model considers that vehicle speeds on unpaved surfaces do not exceed 15 mph. Based on these assumptions, PM₁₀ emissions are estimated at 140.2 pounds per day and will not exceed either the daily or quarterly criteria values. However, if daily grading were to exceed an area of approximately 36 acres, the 150 pounds per day criterion could be exceeded producing a potentially significant impact. Furthermore, because the local area as well as the SCAB is out of attainment of the State PM₁₀ Ambient Air

Quality Standard, even if daily PM₁₀ emissions do not exceed the SCAQMD threshold level, they should be reduced to the extent reasonably feasible. Thus, in addition to the measures included in the URBEMIS7 model, the following measures shall also be implemented.

- a. The property owner/developer shall implement standard mitigation measures in accordance with SCAQMD Rules 402 and 403, to control fugitive dust emissions and ensure that nuisance dust conditions do not occur during construction.
- b. In addition to the standard measures, the property owner/developer shall implement supplemental measures to reduce fugitive dust emissions to the extent feasible during construction operations. To assure compliance, the City shall verify compliance that these measures have been implemented during normal construction site inspections. The measures to be implemented are listed below:
 - Reestablish ground cover on the construction site through seeding and watering.
 - Pave onsite haul roads.
 - Phase grading to prevent the susceptibility of large areas to erosion over extended periods of time.
 - Schedule activities to minimize the amounts of exposed excavated soil during and after the end of work periods.
 - Dispose of surplus excavated material in accordance with local ordinances and use sound engineering practices.
 - Restore landscaping and irrigation that are removed during construction in coordination with local public agencies.
 - Sweep streets on a daily basis if silt is carried over to adjacent public thoroughfares or occurs as a result of hauling.
 - Suspend grading operations during high winds in accordance with Rule 403 requirements.
 - Wash off trucks leaving site.
 - Maintain a minimum 12-inch freeboard ratio on haul trucks.
 - Cover payloads on soils' haul trucks using tarps or other suitable means.

Mitigation Measure 3-3. Prior to the approval of each grading plan (for Import/Export Plan) and prior to issuance of demolition permits (for Demolition Plans), the property owner/developer shall submit Demolition and Import/Export Plans. These plans shall include identification of offsite locations for materials export from the project and options for disposal of excess material. These options may include recycling of materials onsite or to an adjacent site, sale to a soil broker or contractor, sale to a project in the vicinity or transport to an environmentally cleared landfill, with

attempts made to move it within Orange County. The property owner/developer shall offer recyclable building materials, such as asphalt or concrete for sale or removal by private firms or public agencies for use in construction of other projects, if not all can be reused at the project site.

Mitigation Measure 3-4. Prior to the approval of each building permit, the property owner/developer shall submit evidence that high-solids or water-based low emissions paints and coatings are utilized in the design and construction of buildings, in compliance with SCAQMD regulations. This information shall be denoted on the project plans and specifications. Additionally, the property owner/developer shall specify the use of high volume/low pressure spray equipment or hand application. Air atomized spray techniques shall not be permitted.

Mitigation Measure 3-5. Project occupancy is expected to create CO, NO_x, ROG, and PM₁₀ emissions in excess of the SCAQMD suggested daily thresholds and mitigation is warranted to reduce these emissions to the extent reasonably feasible. Because the majority of these emissions are created from mobile sources over which the property owner/contractor has no control, on-site measures to reduce traffic to the extent reasonably feasible should be incorporated into the project design. While the MLUP does anticipate a mixed use developments and this of itself reduces vehicle travel through the use of “internal capture,” the following measures shall also be included:

- Traffic lane improvements and signalization as outlined in the traffic study and MPAH shall be implemented and will generally improve local traffic flow thereby reducing emissions created in the project area.
- To encourage the use of mass transportation, the property owner/contractor shall place bus benches and/or shelters as deemed necessary by the City Traffic and Transportation Manager at any bus stops to be situated along any site frontage routes if not already so equipped.

Mitigation Measure 3-6. While mobile source emissions do present the greatest source of impact, all emissions add to the cumulative total and further mitigation is warranted to reduce stationary source emissions as well. These emissions will be reduced through the following measures:

- The property owner/contractor shall specify the installation of energy efficient lighting, air conditioning, water heaters, and appliances.
- The property owner/contractor shall specify the installation of insulation in excess of Title 24 requirements.

5.3.5 SIGNIFICANT UNAVOIDABLE ADVERSE IMPACTS

Implementation of the proposed project would result in significant short-term air quality impacts associated with NO_x and potentially ROG during the construction phase. Even with implementation of the proposed mitigation measures, this impact is expected to remain potentially significant.

Long-term project operation would result in potentially significant regional air quality impacts by contributing emissions of carbon monoxide, nitrogen oxides, reactive organic gases, and PM₁₀ particulate matter exceeding the SCAQMD's thresholds. However, because the project is deemed to be consistent with the AQMP, daily exceedance of these pollutant species is not expected to result in a postponement of the attainment for nonattainment criteria pollutants in the South Coast Air Basin.

5.4 NOISE

The analysis of noise conditions and potential project impacts consists of calculating existing traffic noise levels along representative affected roadway segments in the project vicinity, prediction of future noise conditions, and comparison of expected noise with relevant standards and criteria to determine impact. This section is based primarily on a noise analysis prepared by BridgeNet Consulting Services International in September of 1998. This report can be found in its entirety in Appendix E of this document.

5.4.1 ENVIRONMENTAL CONDITIONS

The noise sources within the project area include state highways, arterials, railroad and aircraft overflights. This analysis will predict the future noise levels that would occur as a result of implementation of the proposed project. The noise impacts of the proposed project upon land uses within the study area will be addressed and will further specify whether the impacts can be considered significant. The projected noise levels will be compared with applicable City noise criteria and, if the assessment determines that impacts associated with the implementation of the project are significant, then the report will recommend mitigation measures that will reduce the project impacts to an insignificant level.

Noise Definition

Sound is technically described in terms of the loudness (amplitude) of the sound and frequency (pitch) of the sound. The standard unit of measurement of the loudness of sound is the Decibel (dB). Decibels are based on the logarithmic scale. The logarithmic scale compresses the wide range in sound pressure levels to a more usable range of numbers in a manner similar to the Richter scale used to measure earthquakes. In terms of human response to noise, a sound 10 dB higher than another is judged to be twice as loud; and 20 dB higher four times as loud; and so forth. Everyday sounds normally range from 30 dB (very quiet) to 100 dB (very loud).

Since the human ear is not equally sensitive to sound at all frequencies, a special frequency-dependent rating scale has been devised to relate noise to human sensitivity. The A-weighted decibel scale (dBA) performs this compensation by discriminating against frequencies in a manner approximating the sensitivity of the human ear. Community noise levels are measured in terms of the "A-weighted decibel," abbreviated dBA. Exhibit 5.4-1 provides examples of various noises and their typical A-weighted noise level.

Sound levels decrease as a function of distance from the source as a result of wave divergence, atmospheric absorption and ground attenuation. As the sound wave form travels away from the

source, the sound energy is dispersed over a greater area, thereby dispersing the sound power of the wave. Atmospheric absorption also influences the levels that are received by the observer. The greater the distance traveled, the greater the influence and the resultant fluctuations. The degree of absorption is a function of the frequency of the sound as well as the humidity and temperature of the air. Turbulence and gradients of wind, temperature and humidity also play a significant role in determining the degree of attenuation. In cases where receptors are located far away from potential adverse noise sources, intervening topography can have a substantial effect on the effective perceived noise levels.

Noise has been defined as unwanted sound and it is known to have several adverse effects on people. From these known effects of noise, criteria have been established to help protect the public health and safety and prevent disruption of certain human activities. This criteria is based on such known impacts of noise on people as hearing loss, speech interference, sleep interference, physiological responses and annoyance. Each of these potential noise impacts on people are briefly discussed in the following narratives:

HEARING LOSS is not a concern in community noise situations of this type. The potential for noise induced hearing loss is more commonly associated with occupational noise exposures in heavy industry or very noisy work environments. Noise levels in neighborhoods, even in very noisy airport environs, is not sufficiently loud to cause hearing loss.

SPEECH INTERFERENCE is one of the primary concerns in environmental noise problems. Normal conversational speech is in the range of 60 to 65 dBA and any noise in this range or louder may interfere with speech. There are specific methods of describing speech interference as a function of distance between speaker and listener and voice level.

SLEEP INTERFERENCE is a major noise concern for traffic noise. Sleep disturbance studies have identified interior noise levels that have the potential to cause sleep disturbance. Note that sleep disturbance does not necessarily mean awakening from sleep, but can refer to altering the pattern and stages of sleep.

PHYSIOLOGICAL RESPONSES are those measurable effects of noise on people which are realized as changes in pulse rate, blood pressure, etc. While such effects can be induced and observed, the extent is not known to which these physiological responses cause harm or are sign of harm.

ANNOYANCE is the most difficult of all noise responses to describe. Annoyance is a very individual characteristic and can vary widely from person to person. What one person considers tolerable can be quite unbearable to another of equal hearing capability.

EXAMPLES

DECIBELS (dB)*

SUBJECTIVE EVALUATIONS

Near jet engine

Threshold of pain

Threshold of feeling-hard rock band

Accelerating motorcycle at a few feet away

Noisy urban street/heavy city traffic

Food blender

Garbage disposal

Living room music

Vacuum cleaner

Busy Restaurant

Near freeway auto traffic

Window air conditioner

Average office

Soft radio music in apartment

Soft whisper at 5 feet

Average residence without stereo playing

Rustling leaves

Human breathing

Threshold of audibility

Continuous exposure above here is likely
to degrade the hearing of most people

Range of
Speech

140

130

120

110

100

90

80

70

60

50

40

30

20

10

0

Deafening

Very Loud

Moderately Loud

Quiet

Faint

Very Faint

32

16

8

4

2

1

1/2

1/4

1/8

TIMES AS LOUD

* dB are "average" values as measured on the A-scale of a sound-level meter.

(From Concepts in *Architectural Acoustics*: M. David Egan, McGraw Hill, 1972 and U.S. Department of Housing and Urban Development, Office of Community Planning and Development "The Noise Guidebook").



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Exhibit 5.4-1

Typical A-Weighted Sound Levels

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Noise Assessment Metrics

The description, analysis and reporting of community noise levels around communities is made difficult by the complexity of human response to noise and the myriad of noise metrics that have been developed for describing noise impacts. Each of these metrics attempt to quantify noise levels with respect to community response. Most of these metrics use the A-Weighted noise level to quantify noise impacts on humans. A-weighting is a frequency correction that correlates the overall sound pressure levels with the frequency response of the human ear.

Noise metrics can be divided into two categories: single event and cumulative. Single event metrics describe the noise levels from an individual event such as an aircraft flyover or perhaps a heavy equipment pass-by. Cumulative metrics average the total noise over a specific time period, which is typically 1 or 24-hours for community noise problems. For this type of project, cumulative noise metrics will be used.

Cumulative Noise Metrics

Several rating scales have been developed for measurement of community noise. These account for: (1) the parameters of noise that have been shown to contribute to the effects of noise on man, (2) the variety of noises found in the environment, (3) the variations in noise levels that occur as a person moves through the environment, and (4) the variations associated with the time of day. They are designed to account for the known health effects of noise on people described previously. Based on these effects, the observation has been made that the potential for a noise to impact people is dependent on the total acoustical energy content of the noise. A number of noise scales have been developed to account for this observation. Two of the predominate noise scales are the: Equivalent Noise Level (LEQ) and the Community Noise Equivalent Level (CNEL). These scales are described in the following paragraphs.

LEQ is the sound level corresponding to a steady-state sound level containing the same total energy as a time-varying signal over a given sample period. LEQ is the "energy" average noise level during the time period of the sample. LEQ can be measured for any time period, but is typically measured for one hour. This one-hour noise level can also be referred to as the Hourly Noise Level (HNL). It is the energy sum of all the events and background noise levels that occur during that time period.

CNEL, Community Noise Equivalent Level, is the predominant rating scale now in use in California for land use compatibility assessment. The CNEL scale represents a time weighted, 24-hour average noise level based on the A-weighted decibel. Time weighted refers to the fact that noise that occurs during certain sensitive time periods is penalized for occurring at these times. The evening time

period (7 p.m. to 10 p.m.) penalizes noises by 5 dBA, while nighttime (10 p.m. to 7 a.m.) noises are penalized by 10 dBA.

These time periods and penalties were selected to reflect people's increased sensitivity to noise during these time periods. A CNEL noise level may be reported as a "CNEL of 60 dBA," "60 dBA CNEL," or simply "60 CNEL." Typical noise levels in terms of the CNEL scale for different types of communities are presented in Exhibit 5.4-2.

L(N), or L%, is a statistical method of describing noise which accounts for variance in noise levels throughout a given measurement period. L(N), where N equals a percentage, is a way of expressing the noise level exceeded for a percentage of time in a given measurement period. For example, since 15 minutes is 25% of 60 minutes, L(25) is the noise level that is exceeded for fifteen minutes of a sixty minute measurement period. The L(N) metric is the most commonly used for noise ordinance standards.

For example most daytime city, state and county noise ordinances use an ordinance standard of 55 dBA for 30 minutes per hour or an L(50) level of 55 dBA. In other words, the noise ordinance states that for a residential land use, a piece of equipment not located on the property will not be allowed to generate a noise level of 55 dBA for more than thirty minutes in any hour. As the noise level limit increases, the time the noise is allowed to occur within any hour is reduced.

City of Anaheim Noise Criteria

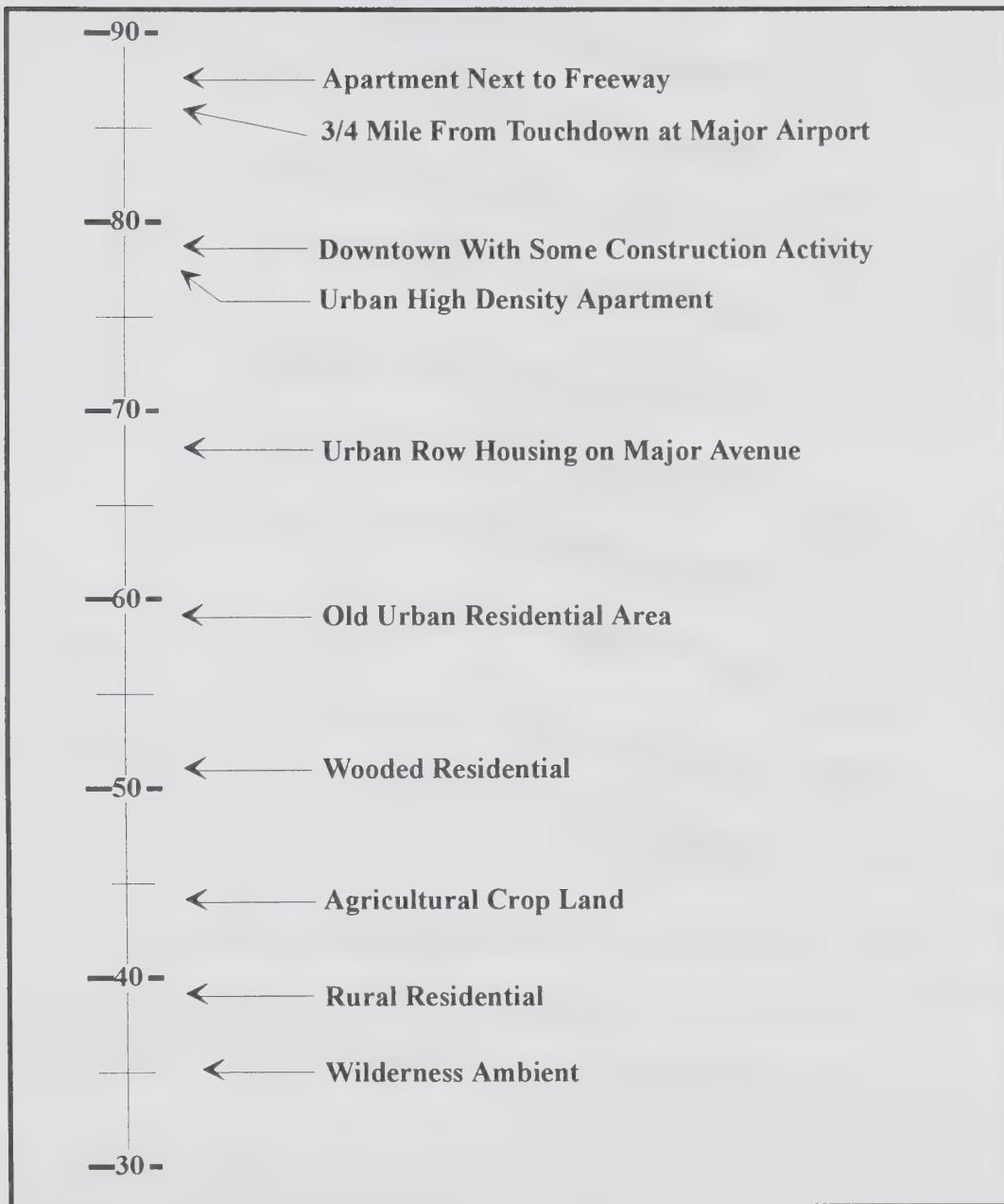
The City of Anaheim has expressed standards specifically for controlling exterior noise exposure levels. The standard states that the maximum noise exposure level at a residential land use due to transportation-related sources is 65 dB CNEL for exterior living areas and 45 dB CNEL for interior living areas. The City does not have specific exterior noise exposure standards for commercial, industrial, office, professional, and public recreation land uses. The City does use the Land Use Compatibility Criteria which are the guidelines set forth by the California Department of Health. Refer to Exhibit 5.4-3 for a listing of these guidelines.

The City of Anaheim has also established noise policies within the Noise Element of the General Plan to address non-transportation related noise sources such as motors, fans, pumps and ventilation equipment. These standards set noise levels and limits on the duration any given noise is allowed to exist at various land uses. The louder the noise level, the shorter the period of time it is allowed to occur. The noise level allowed is dependent upon the type of land use being impacted by the noise.

The relevant sections from the Noise Element are listed below. Table 5.4-1 below lists the specific noise ordinance values for each of the different land use types, the daytime and nighttime noise level

CNEL

Outdoor Location



SOURCE: BridgeNet Consulting Services, Intl.

Exhibit 5.4-2

Typical CNEL Noise Levels

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LAND USE CATEGORY	COMMUNITY NOISE EXPOSURE L_{dn} OR CNEL, dB					
	55	60	65	70	75	80
RESIDENTIAL - LOW DENSITY SINGLE FAMILY, DUPLEX, MOBILE HOMES						
RESIDENTIAL - MULTIFAMILY						
TRANSIENT LODGING- MOTELS, HOTELS						
SCHOOLS, LIBRARIES, CHURCHES, HOSPITALS, NURSING HOMES						
AUDITORIUMS, CONCERT HALLS, AMPHITHEATRES						
SPORT ARENA, OUTDOOR SPECTATOR SPORTS						
PLAYGROUNDS, NEIGHBORHOOD PARKS						
GOLF COURSES, RIDING STABLES, WATER RECREATION, CEMETERIES						
OFFICE BUILDINGS, BUSINESS COMMERCIAL AND PROFESSIONAL						
INDUSTRIAL, MANUFACTURING UTILITIES, AGRICULTURE						

LEGEND

NORMALLY ACCEPTABLE

Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal conventional construction, without any special noise insulation requirements.

CONDITIONALLY ACCEPTABLE

New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features included in the design. Conventional construction, but with closed windows and fresh air supply system or air conditioning will normally suffice.

NORMALLY UNACCEPTABLE

New construction or development should generally be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirements must be made and needed noise insulation features included in the design.

CLEARLY UNACCEPTABLE

New construction or development should generally not be undertaken.

CONSIDERATIONS IN DETERMINATION OF NOISE-COMPATIBLE LAND USE

A. NORMALIZED NOISE EXPOSURE INFORMATION DESIRED

Where sufficient data exists, evaluate land use suitability with respect to a "normalized" value of CNEL or L_{dn} . Normalized values are obtained by adding or subtracting the constants described in Table 1 to the measured or calculated value of CNEL or L_{dn} .

B. NOISE SOURCE CHARACTERISTICS

The land use-noise compatibility recommendations should be reviewed in relation to the specific source of the noise. For example, aircraft and railroad noise is normally made up of higher single noise events than auto traffic but occurs less frequently. Therefore, different sources yielding the same composite noise exposure do not necessarily create the same noise environment. The State Aeronautics Act uses 65 dB CNEL as the criterion which airports must eventually meet to protect existing residential communities from unacceptable exposure to air craft noise. In order to facilitate the purpose of the Act, one of which is to encourage land uses compatible with the 65 dB CNEL criterion wherever possible, and in order to facilitate the ability of airports to comply with the Act, residential uses located

in Community Noise Exposure Areas greater than 65 dB should be discouraged and considered located within normally acceptable areas.

C. SUITABLE INTERIOR ENVIRONMENTS

One objective of locating residential units relative to a known noise source is to maintain a suitable interior noise environment at no greater than 45 dB CNEL of L_{dn} . This requirement, couple with the measured or calculated noise reduction performance of the type of structure under consideration, should govern the minimum acceptable distance to a noise source.

D. ACCEPTABLE OUTDOOR ENVIRONMENTS

Another consideration, which in some communities is an overriding factor, is the desire for an acceptable outdoor noise environment. When this is the case, more restrictive standards for land use compatibility, typical below the maximum considered "normally acceptable" for that land use category, may be appropriate.

Source: California Department of Health, Guidelines for the Preparation and Content of Noise Elements of the General Plan, February 1976.



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Exhibit 5.4-3 Land Use Compatibility Criteria for Community Noise Environment

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limits, the amount of time the listed noise level is allowed to exist, and the corresponding L(N) value. To further clarify the ordinance values, each of the noise level limits and the maximum time allowed are listed for the Single Family Residential case.

The City of Anaheim Noise Element states:

No person shall operate, or cause to be operated, any source of sound at any location within the City or allow the creation of any noise on property owned, leased, occupied, or otherwise controlled by such person, which causes the noise level when measured on any other property either incorporated or unincorporated to exceed:

1. *The noise standard for that land use as specified below for a cumulative period of more that 30 minutes in any hour; or*
2. *the noise standard plus 5 dB for a cumulative period of more that 15 minutes in any hour; or*
3. *the noise standard plus 10 dB for a cumulative period of more that 5 minutes in any hour; or*
4. *the noise standard plus 15 dB for a cumulative period of more that 1 minute in any hour; or*
5. *the noise standard plus 20 dB or the maximum measured ambient, for any period of time.*

The specific noise levels for each land use type are listed below, along with the corresponding times and equivalent L% levels.

**TABLE 5.4-1
NOISE ORDINANCE VALUES BY LAND USE**

Land Use	Daytime Noise Levels (7:00 a.m. - 10:00 p.m.)	Nighttime Noise Levels (10:00 p.m. - 7:00 a.m.)	Maximum Duration (minutes)	Equivalent L(N)
Residential - One and Two Family	55	45	30	L ₅₀
	60	50	15	L ₂₅
	65	55	5	L _{8 3}
	70	60	1	L _{1 7}
	75	65	Never	- - -
Residential – Multiple Dwelling Public Space	55	50	30	L ₅₀

TABLE 5.4-1 (continued)

Land Use	Daytime Noise Levels (7:00 a.m. - 10:00 p.m.)	Nighttime Noise Levels (10:00 p.m. - 7:00 a.m.)	Maximum Duration (minutes)	Equivalent L(N)
Commercial	60	55	30	L ₅₀
Industrial	70	70	30	L ₅₀

Source: City of Anaheim Noise Ordinance, 1978

Existing Noise Environment

The existing noise environment is dominated by the roadways that service the entire area. The project is bordered on the west by I-5, and on the east by SR-57. The main arterial roadways which serve the project area include Katella Avenue, Orangewood Avenue, and State College Boulevard. The Stadium is also serviced by a major commuter rail line which runs through the center of the project site. The site is also subject to aircraft overflights due to events at the Stadium and traffic associated with local airports. During the summer time, the noise environment includes aerial fireworks displays from neighboring Disneyland.

5.4.2 ENVIRONMENTAL IMPACTS

Two types of potential noise impacts may arise from the project: (1) construction noise may impact adjacent developed land uses, and (2) the project will increase traffic and will increase the noise environment at the adjacent areas.

Thresholds of Significance

Appendix G (Significant Effects) of the CEQA Guidelines states that a project may have a significant effect on the environment if it increases substantially the ambient noise levels for adjoining areas. Noise impacts can be considered “generally significant” if the proposed project will cause noise standards or ordinances to be exceeded, or if increases in noise exposure are expected to be 3 dBA or more in areas already exposed to noise levels exceeding the local noise standards. In areas where the local noise standards are not exceeded, noise impacts can be considered “generally significant” only if increases in community noise levels would be 6 dBA or more in built-up areas, or 10 dBA or more in rural areas.

Short Term Construction Noise Impacts

Construction noise is generally high level, short duration noise which represents a potential short term impact the ambient noise levels throughout the project site. Noise generated by construction equipment, including trucks, graders, bulldozers, concrete mixers and portable generators can reach high levels. Excavation and grading activities typically represent the highest potentials for noise impacts. The degree of impacts will be dictated by the amount of construction equipment used, the density of heavy equipment, the proximity to a noise sensitive land use area, and the duration of the grading process. General grading and construction activity noise levels for various pieces of equipment are shown in Exhibit 5.4-4. The noise levels listed in this exhibit represent the range of noises generated at a distance of 50 feet from the equipment. Noise levels emanating from a single source typically fall off at a rate of 6 dB for every doubling of distance from the source.

At a distance of 200 feet, the noise levels shown in Exhibit 5.4-4 are approximately 12 dBA less; at a distance of 1,000 feet, the levels are about 25 dBA less. The loudest piece of equipment that is expected to operate would be equipment used during the grading process (tractors and scrapers).

The 550-acre project area currently consists of industrial, commercial, business office, hotel and retail land uses, which are generally not considered to be noise sensitive. The nearest existing noise sensitive land use to the project site consists of residential development located northeast of the project site, on the west side of SR-57. Most of the northeast section of the project area, located closest to this noise sensitive use, is already developed with commercial and industrial uses. It is not expected that there will be a significant amount of new development and construction noise in this area and no impacts are anticipated.

As previously stated, construction noise represents a short-term impact on ambient noise levels. Every effort must be made to ensure that during construction excessive noise is minimized whenever possible. Noise generated by construction equipment and construction activities can reach high levels. Construction equipment noise comes under the control of the Environmental Protection Agency's Noise Control Program (Part 204 of Title 40, Code of Federal Regulations). Some on-site impacts will occur when developing lands adjacent to existing commercial and industrial business.

The most effective method to control construction noise is through the institution of local control over construction hours. Construction activities should not occur outside of the hours of 7 a.m. through 7 p.m., Monday through Friday, and 8 a.m. through 6 p.m. on Saturdays. No construction should occur on Sundays or Federal holidays.

Railroad Noise Levels

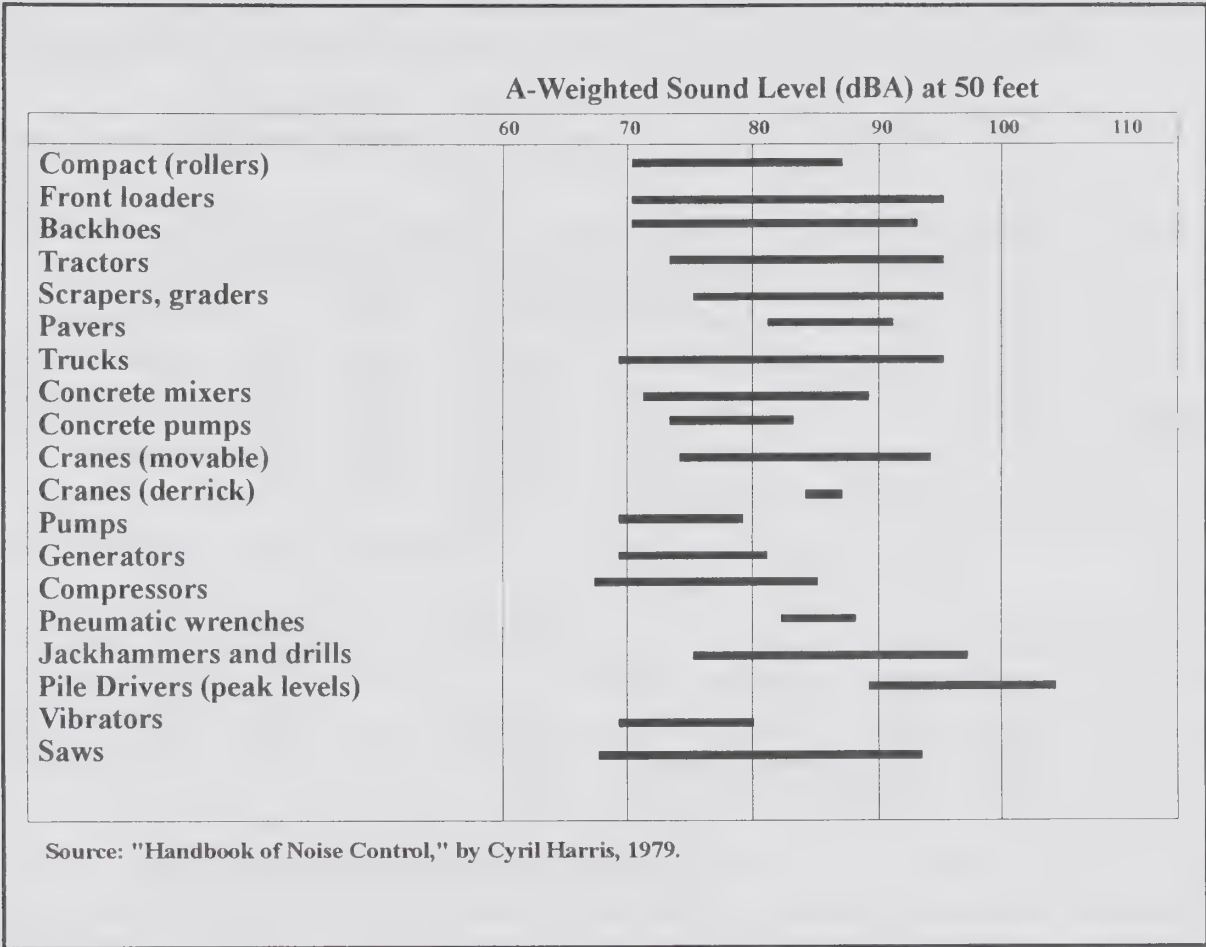
The "Assessment of Noise Environments Around Railroad Operations," (Wyle Laboratories Report WCR 73-5, July 1973) was used to model the train noise levels on the project site. The noise generated by a train pass-by can be divided into two components; the noise generated by the engine or locomotive, and the noise due to the railroad cars. The characteristic frequency of the engine is different than for the cars. The effective radiating frequency is 1,000 Hz for the locomotive engines, and 2,000 Hz for the portion of the noise generated by the cars. The noise generated by the engine is the result of the mechanical movements of the engine parts, the combustion process, the horn if used, and to a lesser extent the exhaust system. The noise generated by the cars is a result of the interaction between the wheels and the railroad track. A source height equal to 0 feet is used for the car noise, and a source height of 10 feet is utilized for the locomotive.

A major commuter rail corridor that connects Anaheim with both Los Angeles and San Diego Counties runs through the middle of the project site and may be the source of significant levels of noise. This line is owned and operated by the Southern California Railroad Authority (SCRRA). This line currently accommodates Amtrak passenger trains running from Los Angeles to San Diego, Metrolink commuter trains running from Los Angeles to Carlsbad, and local freight trains. The line currently operates 11 Metrolink trains per day, and by the end of 2001, they expect to be operating 21 daily trains (Kappell, pers. comm., 1998). There are currently 20 Amtrak trains which use the line each day. This line is also used for through and local freight operations which are scheduled around the current passenger and commuter trains. This line normally accommodates a freight traffic volume of few through trains per week, and a local freight running at least twice a day. These local freights are generally less than ten cars in length while the through freights can be up to 6,000 feet in length. These trains can be operated anytime of the day or night depending upon customer demand.

This operational data was utilized in conjunction with the Wyle Model to project train noise on the project site. The results are presented below in Table 5.4-2 as distances from the railroad centerline to the contour values indicated. The projections do not include topography or barriers which may reduce the noise levels.

TABLE 5.4-2
PROJECTED RAILROAD NOISE LEVELS

Source	Distance to CNEL Contours (ft.)		
	70 dB	65 dB	60 dB
Passenger and Freight Operations	182	351	678
Source: BridgeNet Consulting Services International, September 1998.			



SOURCE: BridgeNet Consulting Services, Intl.



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Exhibit **5.4-4** Typical Construction Noise Levels at 50 Feet

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The railroad line runs through the middle of the project site along the north side of the Stadium. All of the land uses located adjacent to the rail line within the project site are commercial and industrial types of uses. Since the proposed project does not expect to change the number of railroad related operations on this line, and since the land uses located next to the rail line are not considered to be noise sensitive, there are no projected noise impacts on the project due to railroad operations.

Long Term Traffic Noise Impacts

The projected traffic noise levels were established in the CNEL index by computer modeling the roadways in the project vicinity for future traffic and speed characteristics. The noise level projections were computed using the Highway Noise Model published by the Federal Highway Administration ("FHWA Highway Traffic Noise Prediction Model," FHWA-RD-77-108, December 1978). The FHWA Model uses traffic volume, vehicle mix, vehicle speed, and roadway geometry to compute the noise exposure levels. The traffic volumes used in this analysis were taken from the "Draft Anaheim Stadium Area Master Land Use Plan Traffic Study" prepared by Austin-Foust Associates, Inc., and dated August 19, 1998 (see Appendix C).

The impact of the MLUP implementation on the land uses along the roadways within the project site are assessed by comparing 1) the projected noise levels with the completed project in place, with 2) the noise levels that would exist in the future without the project. The difference in noise levels for each of these roadways would be due to the increase in traffic caused by the project alone.

Table 5.4-3 contains the projected traffic volumes for the roadways in the project area. The No Project case is based upon General Plan buildout. The table includes the future traffic volumes for both the No Project and With Project cases. Using these traffic volumes, the projected noise levels were computed for both cases. The time and traffic distributions used for calculating vehicle noise exposure levels are presented in Table 5.4-4. These data are based on traffic counts at 31 intersections throughout the Southern California area.

The results of the noise exposure calculations are listed in terms of distances to the 60 dB, 65 dB, and 70 dB CNEL contours. Table 5.4-5 lists the distances to the noise contours for the Future No Project case, and Table 5.4-6 lists the distances to the noise contours for the Future With Project case. These values are the distances from the centerline of the road to the contour value shown. Note that the values given in Tables 5.4-5 & 5.4-6 do not take into account the effect of the topography, existing noise barriers, or intervening buildings that may alter the roadway noise levels.

TABLE 5.4-3
PROJECTED AVERAGE DAILY TRAFFIC (ADT) VOLUMES

Roadway	Future No Project	Future With Project
Cerritos Ave.		
Lewis St. to State College Blvd	11,000	13,000
Katella Ave.		
I-5 Fwy to Lewis St.	43,000	45,000
Lewis St. to State College Blvd	32,000	36,000
State College Blvd. to SR-57	46,000	49,000
SR-57 to Main St.	48,000	51,000
Gene Autry Way		
I-5 Fwy to State College Blvd.	25,000	26,000
Orangewood Ave.		
I-5 Fwy to State College Blvd.	40,000	41,000
State College Blvd. to SR-57	39,000	38,000
SR-57 to Main St.	28,000	27,000
Lewis St.		
Cerritos Ave. to Katella Ave.	14,000	13,000
Katella Ave. to I-5 Fwy	10,000	8,000
State College Boulevard		
Ball Rd. to Cerritos Ave.	31,000	33,000
Cerritos Ave. to Katella Ave.	32,000	35,000
Katella Ave. to Gene Autry Way	42,000	45,000
Gene Autry Way to Orangewood Ave.	40,000	41,000
Orangewood Ave. to Chapman Ave.	34,000	32,000
Chapman Ave. to Lampson St.	40,000	39,000
Source: Austin-Foust Associates, September 1998.		

TABLE 5.4-4
TRAFFIC DISTRIBUTION PER TIME OF DAY IN PERCENT OF ADT

Vehicle Type	Day	Evening	Night
Automobile	75.71%	12.35%	9.36%
Medium Truck	1.43%	0.23%	0.18%
Heavy Truck	0.58%	0.09%	0.07%
Source: BridgeNet Consulting Services International, September 1998.			

TABLE 5.4-5
DISTANCE TO FUTURE – NO PROJECT CONTOURS

Roadway Section	Distance to CNEL Contours (ft.)			
	ADT	70 dB	65 dB	60 dB
Cerritos Ave.	11,000	< 50	56	120
Lewis St. to State College Blvd.				
Katella Ave.				
I-5 Fwy to Lewis St.	43,000	78	168	362
Lewis St. to State College Blvd.	32,000	64	138	297
State College Blvd. to SR-57	46,000	82	176	379
SR-57 to Main St.	48,000	84	181	390
Gene Autry Way				
I-5 Fwy to State College Blvd	25,000	< 50	96	207
Orangewood Ave.				
I-5 Fwy to State College Blvd.	40,000	61	131	283
State College Blvd. to SR-57	39,000	73	157	339
SR-57 to Main St.	28,000	< 50	104	223
Lewis St.				
Cerritos Ave. to Katella Ave.	14,000	< 50	65	141
Katella Ave. to I-5 Fwy	10,000	< 50	52	112
State College Boulevard				
Ball Rd. to Cerritos Ave.	31,000	63	135	291
Cerritos Ave. to Katella Ave.	32,000	64	138	297
Katella Ave. to Gene Autry Way	42,000	77	165	356
Gene Autry Way to Orangewood Ave.	40,000	74	160	345
Orangewood Ave. to Chapman Ave.	34,000	67	144	310
Chapman Ave. to Lampson St.	40,000	74	160	345
“< 50” Noise contours are within 50’ of the roadway centerline.				
Source: BridgeNet Consulting Services International, September 1998.				

TABLE 5.4-6
DISTANCE TO FUTURE – WITH PROJECT NOISE CONTOURS

Roadway Section	Distance to CNEL Contours (ft.)			
	ADT	70 dB	65 dB	60 dB
Cerritos Ave.				
Lewis St. to State College Blvd.	13,000	< 50	62	134
Katella Ave.				
I-5 Fwy to Lewis St.	45,000	80	173	373
Lewis St. to State College Blvd.	36,000	69	149	322
State College Blvd. to SR-57	49,000	85	183	395
SR-57 to Main St.	51,000	87	188	406

TABLE 5.4-6 (continued)

Roadway Section	Distance to CNEL Contours (ft.)			
	ADT	70 dB	65 dB	60 dB
Gene Autry Way				
I-5 Fwy to State College Blvd	26,000	< 50	99	213
Orangewood Ave.				
I-5 Fwy to State College Blvd.	41,000	62	134	288
State College Blvd. to SR-57	38,000	72	155	333
SR-57 to Main St.	27,000	< 50	101	218
Lewis St.				
Cerritos Ave. to Katella Ave.	13,000	< 50	62	134
Katella Ave. to I-5 Fwy	8,000	< 50	< 50	97
State College Boulevard				
Ball Rd. to Cerritos Ave.	33,000	65	141	303
Cerritos Ave. to Katella Ave.	35,000	68	146	316
Katella Ave. to Gene Autry Way	45,000	80	173	373
Gene Autry Way to Orangewood Ave.	41,000	76	163	351
Orangewood Ave. to Chapman Ave.	32,000	64	138	297
Chapman Ave. to Lampson St.	39,000	73	157	339
“< 50” Noise contours are within 50’ of the roadway centerline.				
Source: BridgeNet Consulting Services International, September 1998.				

To determine the change in noise level due to the project, a comparison is made between the future with and without project noise levels. Table 5.4-7 lists the projected traffic noise levels at a distance of fifty (50) feet from the centerline of the roadways for both the No Project and With Project cases. The last column in the table shows the increased noise level due to the project alone, which is the difference between the Future With Project and Future Without Project noise levels. On most of the roadway segments there is an increase in noise level due to the project, and on some roadway segments, there will be a reduction of noise.

TABLE 5.4-7
NOISE LEVEL 50 FEET FROM ROADWAY CENTERLINE AND
INCREASE IN NOISE LEVELS DUE TO PROJECT

Roadway Section	Future No Project (CNEL)	Future With Project (CNEL)	Increase due to Project (CNEL)
Cerritos Ave.			
Lewis St. to State College Blvd.	65.7	66.5	0.7
Katella Ave.			
I-5 Fwy to Lewis St.	72.9	73.1	0.2
Lewis St. to State College Blvd.	71.6	72.2	0.5

TABLE 5.4-7 (continued)

Roadway Section	Future No Project (CNEL)	Future With Project (CNEL)	Increase due to Project (CNEL)
State College Blvd. to SR-57	73.2	73.5	0.3
SR-57 to Main St.	73.4	73.7	0.3
Gene Autry Way			
I-5 Fwy to State College Blvd	69.3	69.5	0.2
Orangewood Ave.			
I-5 Fwy to State College Blvd.	71.3	71.4	0.1
State College Blvd. to SR-57	72.5	72.4	-0.1
SR-57 to Main St.	69.8	69.6	-0.2
Lewis St.			
Cerritos Ave. to Katella Ave.	66.8	66.5	-0.3
Katella Ave. to I-5 Fwy	65.3	64.3	-1.0
State College Boulevard			
Ball Rd. to Cerritos Ave.	71.5	71.8	0.3
Cerritos Ave. to Katella Ave.	71.6	72.0	0.4
Katella Ave. to Gene Autry Way	72.8	73.1	0.3
Gene Autry Way to Orangewood Ave.	72.6	72.7	0.1
Orangewood Ave. to Chapman Ave.	71.9	71.6	-0.3
Chapman Ave. to Lampson St.	72.6	72.5	-0.1

Source: BridgeNet Consulting Services International, September 1998.

The greatest increase in noise due to the project will be found along Cerritos Avenue between Lewis Street and State College Boulevard (0.7 dB). The next largest increases will be found along Katella Avenue between Lewis Street and State College Boulevard, along State College Boulevard between Cerritos Avenue and Katella Avenue, along Katella from State College Boulevard to Main Street, along State College Boulevard between Ball Road and Cerritos Avenue and between Katella Avenue to Gene Autry Way. The list of the roadway segments expected to experience the greatest increase in traffic noise is shown in Table 5.4-8. All of the projected increases in the traffic noise levels are less than 1 dB, therefore the projected impact due to these increases is expected to be insignificant.

TABLE 5.4-8
LARGEST PROJECTED NOISE INCREASES

Roadway	Section	Increase (dB)
Cerritos Ave.	Lewis St. to State College Blvd.	0.7
Katella Ave.	Lewis St. to State College Blvd.	0.5
State College Blvd.	Cerritos Ave. to Katella Ave.	0.4

TABLE 5.4-8 (continued)

Roadway	Section	Increase (dB)
Katella Ave.	State College Blvd. to SR-57	0.3
	SR-57 to Main St.	0.3
State College Blvd.	Ball Rd. to Cerritos Ave.	0.3
	Katella Ave. to Gene Autry Way	0.3
Source: BridgeNet Consulting Services International, September 1998.		

Some of the roadways in the project are expected to see a decrease in the level of traffic noise due to the project. This is probably due to a rerouting of traffic to widened, more improved arterials. The greatest decrease in noise due to the project will be found along Lewis Street between Katella Avenue and the I-5 Freeway (-1.0 dB). The next largest decreases will be found along Lewis Street from Cerritos Avenue to Katella Avenue, along State College Boulevard between Orangewood Avenue and Chapman Avenue, on Orangewood Avenue between SR-57 and Main Street, along Orangewood Avenue from State College Boulevard to SR-57, and along State College Boulevard between Chapman Avenue and Lampson Street. The list of the roadway segments expected to experience the greatest decrease in traffic noise is shown in Table 5.4-9.

TABLE 5.4-9
LARGEST PROJECTED NOISE DECREASES

Roadway	Section	Decrease (dB)
Lewis St.	Katella Ave. to I-5 Fwy	-1.0
Lewis St.	Cerritos Ave. to Katella Ave.	-0.3
State College Blvd.	Orangewood Ave. to Chapman Ave.	-0.3
Orangewood Ave.	SR-57 to Main St.	-0.2
Orangewood Ave.	State College Blvd. to SR-57	-0.1
State College Blvd.	Chapman Ave. to Lampson St.	-0.1
Source: BridgeNet Consulting Services International, September 1998.		

The proposed project will bring an increase in traffic noise to some sections of some of the roadways within the project area. The greatest increases in long term traffic noise are expected to be along Katella Avenue and State College Boulevard. The largest single increase in traffic related noise due to the project is expected along Cerritos Avenue between Lewis Street and State College Boulevard and it is a projected increase of 0.7 dB. All of the other increases due to the project are 0.5 dB or less. Given that the magnitude of the projected increases in noise are all less than 1 dB, and that all of the

increases are in land uses not sensitive to noise, the long term impact on the existing land uses within the project due to roadway noise is considered to be insignificant.

5.4.3 CUMULATIVE IMPACTS

The noise impacts associated with vehicular traffic described in this section are considered to be cumulative in nature. As noted in Section 5.2 (Transportation and Circulation), the traffic analysis incorporated baseline data that included anticipated growth within the City of Anaheim, as well as regional growth outside of the City. The noise analysis within this section is therefore representative of cumulative scenarios for the project area. Traffic noise changes resulting from implementation of the proposed project would add less than 1 dB to the cumulative traffic noise levels. Further, other noise sources associated with the project area including the railways, aircraft, and noise from events at Anaheim Stadium would not substantially contribute to the cumulative noise environment. This impact is therefore considered to be less than significant.

5.4.4 MITIGATION MEASURES

The only significant impact due to the project will be the short term impact of construction noise on the adjacent land uses. Subsequently, the following mitigation measures shall be implemented by an applicant to the satisfaction of the Chief Building Official:

Mitigation Measures 4-1. During demolition, grading, and construction, noise generated by construction shall be limited by the property owner/developer to 60 dBA along the property boundaries, before 7 a.m. and after 7 p.m., as governed by Chapter 6.7, Sound Pressure Levels, of the Anaheim Municipal Code.

Mitigation Measure 4-2. Limit the hours of operation of equipment that produces noise levels noticeably above general construction noise levels to the hours of 10 a.m. to 4 p.m.

Mitigation Measure 4-3. All internal combustion engines on all of the construction equipment shall be properly outfitted with well maintained muffler systems.

5.4.5 SIGNIFICANT UNAVOIDABLE ADVERSE IMPACTS

Noise from vehicular traffic will incrementally increase roadway noise; this impact will not be perceptible in most locations and is not a significant project-related impact. No significant noise impacts or exceedances of the City's Noise Ordinance are anticipated from future development projects.

5.5 EARTH RESOURCES

The project area and nearby surrounding areas have been the subject of numerous geotechnical and environmental analysis'. Following is a list of reports addressing earth resources in and immediately adjacent to the project area.

- May 1964, the Foundation Investigation Report prepared for Anaheim Stadium by Converse Foundation Engineers.
- April 1979, the Soil and Foundation Investigation Report prepared for the Anaheim Stadium Addition by Converse Ward Davis Dixon, Inc.
- February 1983, Environmental Impact Report for the Anaheim Stadium Center Orangewood Site Master Plan, prepared by Phillips Brandt Reddick, Inc.
- September 1988, Environmental Impact Report for IDM Business Center in the City of Anaheim, prepared by The Planning Center.
- May 1991, the Report - Geotechnical Investigation, Anaheim Stadium Warehouse/Office Building, 2000 South State College, prepared by Smith-Emery Company.
- March 1992, the Report of Foundation Investigation, Office and Support Facilities Annex, Anaheim Stadium, prepared by STE Associates, Inc.

The analysis which follows is based upon the above referenced reports as well as the Anaheim Sports Center Draft EIR prepared in January 1996.

5.5.1 ENVIRONMENTAL CONDITIONS

Geology and Soils

The project site is located within the Peninsular Range Province which extends from Los Angeles County to southern Baja California, Mexico. The project site is located near the southeasterly margin of the Central Block, a portion of the Los Angeles Basin. The ground surface of the Central Block is represented by broad, low relief, essentially flat plain. The Central Block is a very large elongated structural trough filled with many thousands of feet of Quaternary and Tertiary sediments. The Newport-Inglewood Fault trends northwest-southeast, approximately 9 miles south of the site. This fault zone represents the western edge of the Central Block and is characterized by several low, well-rounded hills along the fault trace. The northern margin of the Central Block is represented by the Whittier Fault, approximately 9 miles north of the site at the base of the Puente Hills.

Geologically, the project site is situated on a relatively flat surface with a shallow 16-foot-per-mile slope (250:1) to the southwest. This surface was formed by stream deposition meandering back and forth,

creating a broad alluvial plain. The alluvial deposits were derived predominately from the Santa Ana River.

The entire eastern portion of the site, between approximately the Stadium and the Santa Ana River, lies within the zone of potential liquefaction as identified on Seismic Hazard Map (Anaheim Quadrangle) prepared by the State of California Division of Mines and Geology (DMG).

A 2,000-foot-thick section of alluvium (unconsolidated sediment) underlies the project site. These materials consist of predominately horizontally bedded sands and silts. Based on borings in 1979, the alluvium has not been deformed or displaced significantly by folding or faulting to depths of at least 30 feet below the existing ground surface.

Sedimentary formations underlying the site consist of consolidated and semiconsolidated sandstone, siltstone, and conglomerates of Cretaceous to late Tertiary age. The more significant formations underlying the site are from youngest to oldest: Fernando, Puente, El Modeno Volcanics, Topanga, Vaqueros, and Sespe formations.

Soils underlying the project site include the Hueneme and Metz series (U.S. Department of Agriculture, Soil Conservation Service and Forest Service, 1978). The Hueneme series is characterized by moderately rapid permeability, slow runoff, and a slight erosion potential. The Metz series is characterized by moderate permeability, slow runoff, and a slight erosion potential.

Based on boring samples obtained during the geotechnical investigation conducted in 1964 for the development of Anaheim Stadium, the upper 12 to 20 feet of soil consists of medium-dense, fine and fine-to-medium sand with occasional traces of gravel and infrequent seams of silt. Below the upper layer of sand, the soil is more silty; and alternate layers of silt, sandy silt, silty sand, and sand were found to be predominant soil types in the next 25 to 45 feet. Below 45 feet, fine-to-coarse sand with up to 50 percent gravel and rock was encountered in most of the borings. No groundwater was observed to the maximum boring depth of 80 feet. Based on a geologic investigation conducted in April 1979, review of groundwater wells in the vicinity of the project site indicated that groundwater levels were approximately 130 feet below the existing onsite ground surface.

Geologic Faulting and Seismicity

Earthquakes are common to Southern California. Geologic evidence is used to determine the likelihood of future rupture along a fault. Faults are described as active, potentially active, or inactive, based on their potential for activity. Those faults that give evidence of surface displacement within Holocene time (the last 11,000 years) have the highest potential of generating earthquakes again and are described as active. Distinct landforms suggesting fault movement within the last 11,000 years

include sag ponds, offset drainages, linear valleys, and springs. Special study zones have been established along known active faults in California in accordance with the Alquist-Priolo Special Studies Zones Act of 1972.

Faults that are poorly defined or inadequately studied but that have shown activity within the last 1.6 million years are considered potentially active. As such, their recurrence rates may be tens of thousands of years long but still capable of producing moderate-to-large earthquakes within the design life of many critical or long-lifetime structures.

The nearest active faults to the project site are the Newport-Inglewood Fault located approximately 9 miles southwest of the site and the Whittier Fault, located approximately 8 miles northeast of the site. The nearest potentially active fault is the El Modeno Fault, which is located approximately 5 miles west of the site.

Historic earthquakes that have caused substantial groundshaking in the project area include the 1933 Long Beach earthquake (magnitude 6.3) along the Newport-Inglewood Fault Zone (NIFZ), the 1987 Whittier Narrow earthquake (magnitude 5.9) on the Elysian Park Thrust Fault, the 1992 Yucca Valley (magnitude 7.4), and the 1857 Fort Tejon earthquake (magnitude 7.9) on the San Andreas Fault. In addition, the 1994 Northridge earthquake (magnitude 6.6) caused substantial groundshaking in the project area and resulted in damage to Anaheim Stadium. A large earthquake in 1812 also occurred on either the southern portion of the Newport-Inglewood Fault Zone or on the San Andreas Fault near San Bernardino.

Earthquakes from several active and potentially active faults in the region could affect future developments within the project area (see Exhibit 5.5-1). The active and potentially active faults which are capable of generating strong ground motion at the site include the Newport-Inglewood, Whittier, and Elsinore faults. Other faults that may be capable of generating strong ground motion within the project area include faults located offshore (i.e., Palos Verdes Fault Zone), more distant onshore faults (i.e., San Jacinto and San Andreas faults), and local faults (i.e., Norwalk, El Modeno, and Peralta Hills faults).

5.5.2 ENVIRONMENTAL IMPACTS

Thresholds of Significance

In assessing whether ultimate development of the proposed project would result in significant impacts related to earth resources, a significant impact would occur if the project would:

- Expose people or structures to major seismic hazards beyond an acceptable level.
- Permit development in areas of unsuitable and unmitigable geologic conditions.

- Create substantial soil erosion.

Geology and Soils

Development of the proposed project will be located on relatively flat terrain that has no major geologic constraints. The project site does not contain geologic conditions that would result in unstable conditions. However, a substantial portion of the site between the Stadium and the Santa Ana River has been identified as a zone of potential liquefaction, according to the State of California Division of Mines and Geology. This impact is addressed in the Geologic Faulting and Seismicity section below.

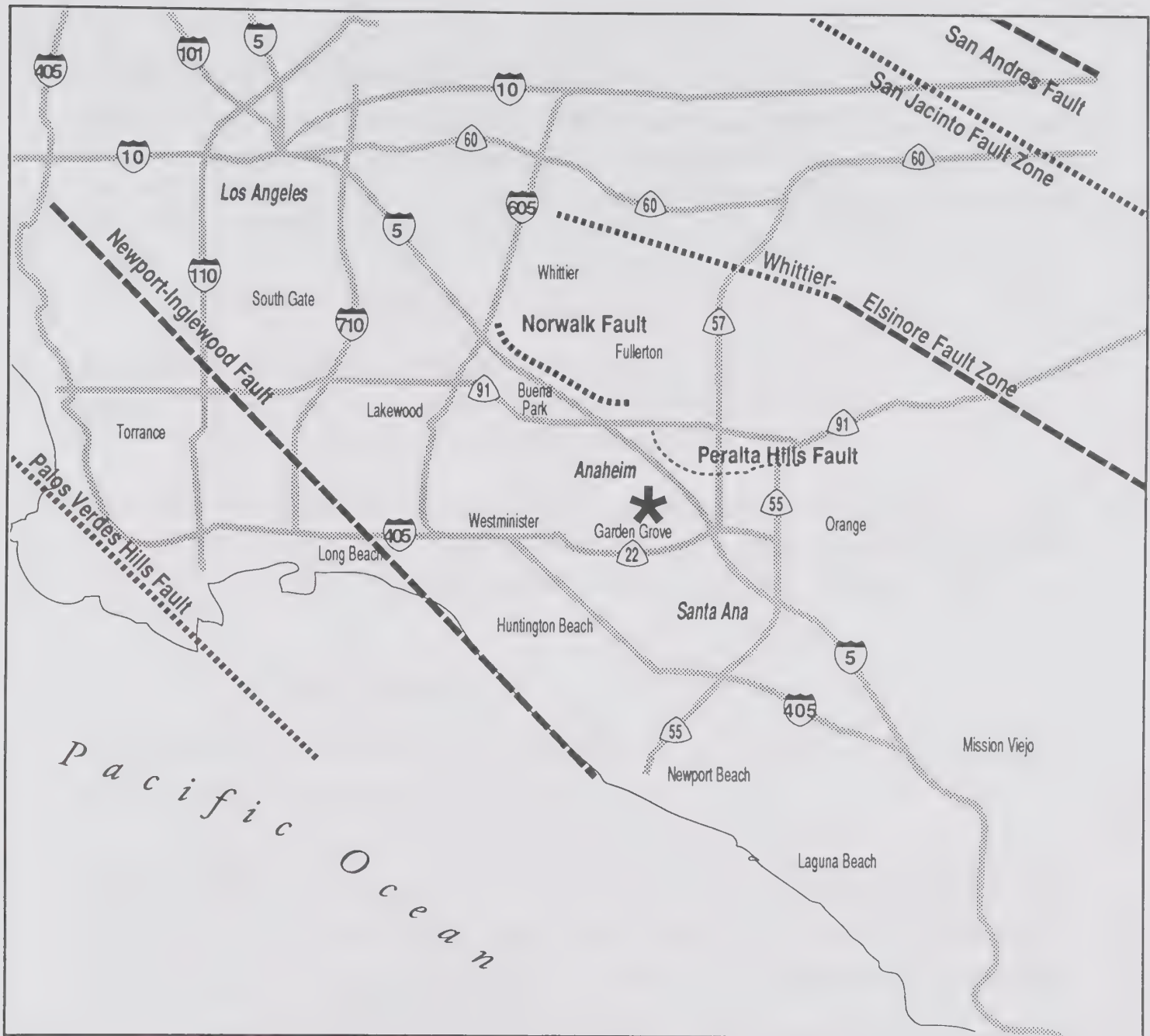
The near-surface soils are generally medium-dense, fine, and fine-to-medium sand with occasional traces of gravel and infrequent seams of silt. These soils which include the Hueneme and Metz series are considered to have a slight erosion potential. Since the project area is relatively flat and the soils are considered to have a slight erosion potential, there is little potential for erosion. As discussed in Section 5.6, Hydrology and Water Quality, the project applicant will be required to comply with the National Pollution Discharge and Elimination System (NPDES) regulation. Compliance with this regulation would require the implementation of erosion control measures during construction activities.

Geologic Faulting and Seismicity

As with other developments in Southern California, the proposed project will be exposed to impacts from earthquakes. The proposed project would not experience ground rupture impacts because there are no known faults found on or through the project site.





The project site could experience groundshaking during earthquakes. The maximum peak ground acceleration would be 0.4g, which would be experienced by a maximum credible magnitude earthquake of 7.5 on the Richter Scale along the Whittier-Elsinore Fault. This maximum peak ground acceleration is similar to the acceleration that could be experienced throughout much of Southern California. Therefore, while there is the potential for damage from groundshaking, it is not unusually severe compared to general conditions in Southern California.

Earthquakes could also result in secondary seismic effects including landslides, liquefaction, and differential settlement. Since there are no major slopes on or in the immediate vicinity of the project site, there is no possibility of seismically induced landslides on the project site. Liquefaction occurs when loose, sandy, water-saturated soils are subject to strong seismic ground motion of substantial duration. The eastern portion of the project site, between the Stadium and the Santa Ana River, lies within a zone of potential liquefaction, according to the Seismic Hazard Map (Anaheim Quadrangle)



SOURCE: Orange County Environmental Management Division 1986; Ziiony & Jones, 1989.

LEGEND

-  Project Site Location
-  Alquist Priolo Special Studies Zone
-  Active
-  Potentially Active

prepared by the State of California Division of Mines and Geology (DMG). This is a potentially significant impact of implementation of the MLUP. Development occurring within mapped zones of potential liquefaction will be required to submit a site specific report in compliance with DMG Special Publication 117 “Guidelines for Evaluating and Mitigating Seismic Hazards in California.”

5.5.3 CUMULATIVE IMPACTS

Soils and geologic influences are very site specific, and there is little, if any, cumulative relationship between the development of the proposed project and the development of the cumulative projects identified in Section 4, General Description of Environmental Setting, of the EIR.

Development of the proposed project and the related projects may expose future populations to regional seismic hazards; however, seismic safety standards for new construction and ongoing provisions for emergency preparedness and response are anticipated to reduce such risk, on a project-by-project basis, to acceptable levels.

5.5.4 MITIGATION MEASURES

No significant geology impacts would occur; however, the following measures are standard conditions of the City of Anaheim for project development permits.

Mitigation Measure 5-1. Prior to approval of a grading plan, the property owner/developer shall submit to the Public Works Department a site specific report in compliance with DMG Special Publication 117 “Guidelines for Evaluating and Mitigating Seismic Hazards in California.” The report shall be prepared by an engineering geologist and geotechnical engineer. All grading shall be in conformance with Title 17 of the City of Anaheim Municipal Code.

Mitigation Measure 5-2. Prior to the issuance of each building permit, the property owner/developer shall submit for review and approval, detailed foundation design information for the proposed buildings, prepared by a civil engineer, based on recommendations by a geotechnical engineer.

Mitigation Measure 5-3. Prior to the issuance of each foundation permit, the property owner/developer shall submit a report prepared by a geotechnical engineer for review and approval which shall investigate the subject foundation excavations.

Mitigation Measure 5-4. Prior to the issuance of each building permit, the property owner/developer shall submit plans showing that the proposed structure(s) has been analyzed for earthquake loading and designed according to the most recent seismic standards in the Uniform Building Code adopted by the City of Anaheim.

Mitigation Measure 5-5. Prior to final building inspection for any proposed hotel uses, the property owner/developer shall submit an earthquake emergency response plan to the City of Anaheim Planning Department for review and approval. The plan shall require posted notices in all hotel rooms on earthquake safety procedures and incorporate ongoing earthquake training for hotel staff.

Mitigation Measure 5-6. During grading activities, the property owner/developer shall implement standard practices from City Ordinance (Title 17) and policies.

5.5.5 SIGNIFICANT UNAVOIDABLE IMPACTS

Implementation of the proposed project along with the above mitigation measures would not result in any significant geological impacts.

5.6 HYDROLOGY AND WATER QUALITY

Information used for this section originates from several data sources that were prepared for the project area and/or the surrounding vicinity. These sources include *Anaheim Stadium Business Center Draft Environmental Impact Report* (City of Anaheim 1986), *Stadium Business Park EIR No. 277 Draft Environmental Impact Report* (Ultrasystems 1987), *IDM Business Center EIR (The Planning Center 1988)*, *Central Park Towers Draft Environmental Impact Report* (PBR 1990), *Anaheim Sports Center Draft Environmental Impact Report* (MBA 1996), and *City of Anaheim General Plan* (1984).

5.6.1 ENVIRONMENTAL CONDITIONS

Hydrology

Regional Conditions

The Santa Ana River, located adjacent to the project site, provides the backbone for the drainage system in the City. The Santa Ana River originates in the San Bernardino Mountains near Big Bear Lake and travels in a southwesterly direction to the sea at the Huntington Beach/Newport Beach city boundary. Historically, the river flowed continuously throughout the year; however, due to numerous alterations to the river, current flows are primarily intermittent. Flows throughout the year are dependent on discharges from Prado Dam, Metropolitan Water District (MWD) groundwater basin replenishment programs, and storm activity. The Orange County Flood Control District has jurisdiction over the Santa Ana River in the project vicinity.

Onsite Conditions

The central portion of the project area drains into the Southeast Anaheim Channel (also referred to as E12) which generally parallels State College Boulevard. The County of Orange maintains this channel. The channel was constructed in 1967 and is 9-foot by 9-foot reinforced concrete box that discharges into the Santa Ana River north of Chapman Avenue. The drainage channel collects urban runoff from approximately 1,541 acres through various tributary drains in southeast Anaheim. The channel has been designed to convey the 100-year storm that generates a flow of approximately 910 cubic feet per second (cfs) (PBR 1990).

The western portion of the project area drains into OCFCD's Spinnaker Storm Drain (CO5P21). This drain discharges into OCFCD's regional facility, the East Garden Grove-Wintersburg/Oceanview Channel System.

The project area is almost entirely covered with impermeable surfaces. Runoff in the project area occurs primarily through sheet flow across the parking areas in a southeast direction to the surrounding street system. According to the Anaheim General Plan, the street system has been designed to convey the theoretical 10-year storm event while maintaining one dry lane in each direction. Catch basins located within the street system collect gutter runoff and transport it via the drainage system to the Southeast Anaheim Channel.

Flooding

Regional Conditions

Rainfall in the Santa Ana River watershed normally occurs in the winter months between November and April.

The Federal Emergency Management Agency (FEMA) is responsible for designating flooding limits for areas along medium and large drainage courses. Flood Insurance Rate Maps (FIRM) are published by FEMA to indicate areas of potential flooding for various sized events, such as a 100-year event and a 500-year event.

Currently, a \$1.3 billion improvement project is occurring along the Santa Ana River that includes improvements to the Seven Oaks and Prado Dam, in addition to downstream channel facilities. These improvements are expected to provide the project area protection from a 100-year flood.

Onsite Conditions

The project area is located within Zone A99 and X designation. The A99 zone has been identified in the community flood insurance study as an area. The entire eastern portion of the site, between approximately the Stadium and the Santa Ana River, lies within the zone of potential liquefaction as identified on Seismic Hazard Map (Anaheim Quadrangle) prepared by the State of California Division of Mines and Geology (DMG).

Water Quality

Regional Conditions

Water quality is relatively high at the upper end of the Santa Ana watershed, with water quality decreasing progressively in downstream urban areas. Major sources of pollutants include agricultural runoff, wastewater treatment discharges, livestock waste, and poor quality water imported from the Colorado River. The Orange County Water District (OCWD) maintains historical records of water

quality measurements below Prado Dam which show a gradual deterioration. The average total dissolved solids (TDS) for the river below Prado Dam have increased from the low 500s in late 1940s to levels in excess of 600 in the late 1980s and early 1990s.

Onsite Conditions

Water pumped from Santa Ana River Basin wells within the project area are naturally filtered in the underlying sand, rock strata, and soil. This water is generally delivered directly into the transmission and distribution mains without any treatment. Groundwater pumped into the City's reservoirs is disinfected to ensure sanitary quality. Treated water purchased from the MWD is filtered and disinfected at MWD's Diemer treatment plant in Yorba Linda. Untreated Colorado River water and state project water, or blends of both, purchased from MWD is received at the City's Walnut Canyon Reservoir via connections with MWD's Santiago Lateral. The water is, in turn, filtered and disinfected at the City's August F. Lenain Filtration Plant before distribution. This treatment process results in water quality that meets or exceeds drinking water standards.

Analysis for organic chemicals is routinely performed on all the City's drinking water wells and treatment plant. Nineteen wells out of 30 wells tested show at least trace amounts of contamination with volatile organic chemicals. Two of these wells are out of service because they exceed the maximum contaminate level (MCL) for trichloroethylene (TCE). Thirteen wells show trace amounts of freon compounds, and 11 wells have trace amounts of herbicides. Eighteen wells show trace amounts of other organic chemicals.

According to the OCWD, two wells are located on the project site. The first well is a monitoring well located on the eastern border of the property near the point where State Route 57 (Orange Freeway) crosses the Santa Ana River channel. The second well is a production well located to the south of the existing stadium. Groundwater sample results taken in April and May 1997 at these wells, respectively, indicated that groundwater at both wells meets OCWD's primary drinking water standards (OCWD 1997). Moreover, the City has and continues to supply drinking water meeting all federal, state, and county drinking water regulations and has had no violations of the status that would warrant public notification. Surface water quality (e.g., runoff from storms) is generally poor due to the prominent use of the project area as parking facilities. In general, pollutants such as oil, petroleum, heavy metals, nutrients, and trash collect on the surface of paved areas and are washed into the drainage system during storm events. During nonstorm events, the only source of runoff is from limited irrigation of landscaping and the washing of paved areas for maintenance purposes. Catch basins and gutters collect and direct runoff to the Southeast Anaheim Channel facility which runs roughly parallel to State College Boulevard and discharges into the Santa Ana River.

5.6.2 ENVIRONMENTAL IMPACTS

Thresholds of Significance

The proposed project is considered to have a significant impact if it would cause the following conditions:

- Substantially increase runoff rates beyond existing conditions
- Expose people or property to flooding
- Result in the degradation of water quality

Hydrology

Implementation of the proposed project would result in a total maximum development of approximately 13.3 million square feet on approximately 550 acres of land. The site currently contains approximately 7.5 million square feet of development. The planned uses for the project area include office, industrial, retail and hotels. Although no specific designs have been proposed, the drainage system necessary to support this type of development would likely include roof collection systems for structures, ribbon drains and sheet runoff within parking areas, and catch basins and onsite storm drains.

Implementation of the project involves primarily the redevelopment of existing land uses. Thus the project would not significantly increase the amount of impervious surfaces. The planned widening of certain major streets, such as Katella Avenue, will be at least partially offset by the concurrent implementation of the landscape plan. As a result, the runoff rates are expected to remain approximately the same compared to the existing conditions. The City of Anaheim Public Works Department and the Orange County Flood Control District would ultimately review the design of the drainage system. Design requirements of these two agencies would ensure that runoff is properly conveyed and discharged into the Southeast Anaheim Channel, Spinnaker Storm Drain, etc., as appropriate. Impacts associated with the drainage system of the project are, therefore, considered less than significant.

Flooding

The project area is currently located within an area designated for potential limited flooding from the Santa Ana River. Further, both the Southeast Anaheim Channel and the Spinnaker Storm Drain have been determined by the Orange County Flood Control District to be deficient to convey 100-year storm discharges. While the Santa Ana River within the project limits has recently been widened, the flood hazard reduction requirements will continue until such a time that improvements to the Seven Oaks and

Prado Dam and downstream channel facilities are completed under the Santa Ana River Mainstem Project (expected completion in 1999). Flooding levels are expected to vary between 1 and 3 feet of flooding. Without further flood improvements and a Letter of Map Revision to the FIRM map, uses proposed for the eastern portion of the project area would be required to construct non-residential structures at least 3 feet above flood levels and flood-proof all structures that are constructed below flood levels. Although detailed design plans are not available at this stage of the planning process, habitable structures associated with the project would be constructed above the land at which a 100-year flood would occur onsite, in accordance with the City's Flood Hazard Reduction Ordinance (Chapter 17-28 of the Anaheim Municipal Code). Mitigation measures will be required to ensure that future structures meet these standards or any requirements in effect at the time of the request for building permits.

Water Quality

Short-term

During grading and construction activities, there will be a potential for surface water runoff to carry sediment and small quantities of pollutants into the stormwater system. Soil erosion may occur along project boundaries during construction and in areas where temporary soil storage is required. Small quantities of pollutants, such as oil or other fluids used for construction, have the potential for entering the storm-drainage system, thereby degrading water quality.

Commercial operations that result in a disturbance of one acre or more of total area shall comply with municipal National Pollutant Discharge Elimination System (NPDES) requiring the development and implementation of Best Management Practices (BMP) to control erosion and siltation and contaminated runoff from the construction sites. As part of this compliance, the project would be subject to City and County grading ordinances which already contain adequate requirements for construction practices to control erosion. Such requirements would include the preparation of a Water Quality Management Plan (WQMP) in accordance with the Orange County Drainage Area Management Plan.

As implementation of the project would result in the disturbance of more than 5 acres, the project would also be required to comply with state and federal NPDES requirements. In California, the State Water Resources Control Board has issued a state wide "General Permit" for construction activities that require a NPDES permit. Under the NPDES regulations, individual developments within the project area will be required to obtain a general permit with the RWQCB. The permit process includes filing a Notice of Intent (NOI) with the RWQCB at least 90 days prior to the onset of grading. The NOI includes a stormwater pollution prevention plan (SWPPP) that identifies what structural and nonstructural BMPs, such as sandbag dikes, temporary desilting basins, and spillways, will be used to reduce water quality impacts during construction.

With the implementation of a WQMP and SWPPP, in conjunction with the NOI for the project area, short-term water quality impacts would be reduced to less-than-significant levels.

Long-term

Development within the project area would continue to allow stormwater to transport surface water contaminants from roadway surfaces, landscape areas, parking lots, and other exposed surfaces into the storm-drain system. In general, pollutants from these areas are most concentrated during the "first flush" of runoff, which occurs during the first 0.5 to 1.0 inches of rain. Typical urban contaminants (i.e., oils, grease, surfactants, heavy metals, solvents, pesticides, or nutrients) can be expected in the runoff reaching the storm drains in the project area. In addition, implementation of the project would result in continued vehicular activity in the project area, thus contributing to the amount of automobile related contaminants. Long-term NPDES requirements contained within the SWPPP will also assist in the reduction of pollutants flowing into the storm-drainage system.

5.6.3 CUMULATIVE IMPACTS

The cumulative study area for hydrology, flooding, and water quality impacts is the Santa Ana River watershed. Current, known, and future projects within this study area will continue to increase impervious surfaces (which will increase runoff rates), place structures within flood-prone areas, and incrementally add to the amount of pollutants discharged into the drainage system. The proposed project would not result in a substantial adverse change to the existing conditions present within the cumulative study area. Consequently, the project's contribution to cumulative impacts is considered less than significant.

5.6.4 MITIGATION MEASURES

Hydrology

Mitigation Measures 6-1. Prior to the issuance of building permits, the property owner/developer shall submit a detailed drainage plan to the City of Anaheim Public Works Department and the Orange County Flood Control District for review and approval. This drainage plan shall be in conformance with the City's Master Plan of Drainage, Drainage District Map 27. The drainage plan shall demonstrate that runoff will effectively be conveyed to the surrounding offsite drainage system and runoff rates would not affect receiving drainage facilities. More specifically, the drainage plan shall examine the existing and the proposed conditions within the project limits and detail drainage deficiencies based upon the water elevations of the Santa Ana River in accordance with Drainage District Map 27. All drainage components shall be designed to the minimum requirements of the City and County.

Flooding

Mitigation Measure 6-2. Prior to the issuance of a grading permit, the property owner/developer shall submit plans documenting that the design of all aboveground structures (with the exception of parking structures) shall be at least 3 feet higher than the 100-year flood zone, where applicable. All structures below this level shall be flood-proofed to prevent damage to property or harm to people.

Mitigation Measure 6-3. Prior to the issuance of building permits, the property owner/developer shall demonstrate project conformance with the City's Flood Hazard Reduction Ordinance No. 4136 (Chapter 17.28 of the Anaheim Municipal Code) to the City of Anaheim Public Works Department, which pertains to properties that lie within the "A99" Special Flood Hazard Zone (Anaheim Floodplain Overlay Zone).

Water Quality

Mitigation Measures 6-4. At least 90 days prior to the initiation of grading activities for projects greater than five acres, a NOI shall be filed with the RWQCB by the property owner/developer pursuant to state and federal NPDES requirements. As part of the NOI, a SWPPP shall be prepared. The property owner/developer shall also prepare and submit to RWQCB a Water Quality Management Plan (WQMP) in accordance with the City's municipal NPDES requirements and the Orange County Drainage Area Management Plan. The SWPPP, in conjunction with the WQMP, will describe the structural and nonstructural BMPs that will be implemented during construction (short-term) within the project area as well as BMPs for long-term operation of the project area. Long-term measures could include, but may not be limited to, street sweeping, trash collection, proper materials storage, designated wash areas connected to sanitary sewers, filter and grease traps, and clarifiers for surface parking areas.

5.6.5 SIGNIFICANT UNAVOIDABLE ADVERSE IMPACTS

No significant impacts have been identified. With the incorporation of identified mitigation measures, potentially significant impacts would be avoided, and project design features would be consistent with City, County, and state requirements for hydrology and water quality.

5.7 EMPLOYMENT, POPULATION, AND HOUSING

This section analyzes the employment, population, and housing conditions potentially affected by implementation of the Anaheim Stadium Area MLUP. The following geographic zones were analyzed:

- City of Anaheim. The City of Anaheim is addressed with respect to employment, population, and housing.
- Orange County Subregion. The Southern California Association of Governments (SCAG) analyzes jobs/housing balance at the subregional level. The project is located in the Orange County Subregion.

The following sources were used in the preparation of this section:

- SCAG 1998 Population, Employment & Housing data; SCAG 1998 Housing Unit Estimates.
- U.S. Bureau of the Census, 1990.
- City of Anaheim (Census Data from 1980 through 1994).
- Anaheim Sport Center EIR, Michael Brandman Associates, January 1996.
- Employment, Population, and Housing Analysis for the Disneyland Resort EIR, Hamilton, Rabinovitz & Alschuler, October 1992.
- Center for Demographic Research, Cal State Fullerton.

5.7.1 ENVIRONMENTAL CONDITIONS

Employment

Recent Employment Trends

Table 5.7-1, Recent Employment Trends in Two Zones Around the Project Area, 1980 to 1990, summarizes the 1980 to 1990 historical trend in total employment around the project site as forecasted by SCAG. While employment increased dramatically from 1980 to 1990 in both geographic zones, these gains were followed by a decrease in total jobs countywide from 1990 to 1994 as a result of the recession. However, the City of Anaheim showed impressive economic strength in gaining approximately 7 percent, or approximately 12,000 jobs during the period in which the County lost over 43,000 jobs, or 3 percent of the total.

TABLE 5.7-1
RECENT EMPLOYMENT TRENDS IN TWO ZONES
AROUND THE PROJECT AREA, 1980 TO 1990

Geographic Zone	1980	1990	1994	1980 to 1990 (Change)	1990 to 1994 (Change)
				Percent	Percent
City of Anaheim	144,923	170,933	182,962	+ 18	+7
Orange County Subregion	912,309	1,305,098	1,262,400	+ 43	-3
Source: SCAG 1998.					

The period from 1980 to 1994 represents an increase in jobs of 38 percent and 26 percent in the County and City, respectively. Further, the trend in employment from 1990 to 1994 has experienced a significant reversal since 1994 along with the continued expansion of the California economy. The latest figures from the Center for Demographic Research indicate total employment in the County to be 1,327,200 as of September 1997, an increase of over 5 percent or almost 65,000 new jobs since 1994.

The overall development of the region has been fueled by: (1) continued population and manufacturing growth in Los Angeles County; (2) the transformation of Orange County from a suburban bedroom community that housed workers employed in Los Angeles County into a major manufacturing, tourism, and professional services center that competes successfully in regional, national, and international markets; and (3) the development of San Bernardino and Riverside counties into major residential communities that supply workers to the growing manufacturing and services sector employers located in Orange and Los Angeles counties.

One study suggests that Anaheim's rapid growth over the past decade has resulted in its emergence as the principal city within a new Central Orange County "urban core" (Robert Charles Lesser and Company 1989) consisting of Anaheim, Garden Grove, Tustin, and Santa Ana. Urban cores are defined in this study as a feature of post-industrial metropolitan structure consisting of multiple centers with concentrations of regional and export-oriented employment. The study suggests that there are 26 such urban cores in the greater Los Angeles metropolitan area, four of which are located in the Central Orange County urban core. By 1990, the Central Orange County Core was the second-fastest growing core not only within Orange County, but also among all urban cores in the state and was superseded only by a neighboring Orange County urban core that includes the John Wayne Airport area, Irvine, and Costa Mesa. According to this analysis, Anaheim's rapid growth is due largely to its superior freeway access and availability of housing, including its supply of executive housing in the Anaheim Hills area. Together, these factors have made the City an attractive location for office space and subregional headquarters of major corporations.

Table 5.7-2, Unemployment Rate Trends in the City of Anaheim and Orange County, 1980 to 1996, summarizes the trend in unemployment rates in the City of Anaheim and Orange County as a whole. These data show that 1980 unemployment rates in Anaheim and the County were essentially the same (4.3 compared to 4.7 percent), and that by 1990, the unemployment rate in both zones declined about 1 percent, based on California Employment Development Department data for Orange County. However, unemployment has since increased from 1990 to 1996 by 1.5 percent in Anaheim and 0.8 percent in the County. Both of these rates remain approximately even with or below nationwide and statewide averages.

TABLE 5.7-2
UNEMPLOYMENT RATE TRENDS IN THE CITY OF ANAHEIM
AND ORANGE COUNTY, 1980 TO 1996

Geographic Zone	1980 (percent)	1990 (percent)	1996 (percent)	1980 to 1990 (Change)		1990 to 1996 (Change)	
				Amount	Percent	Amount	Percent
City of Anaheim	4.7	3.7	5.2	-1.0	-21	+1.5	+41
Orange County	4.3	3.3	4.1	-1.0	-23	+0.8	+24
Source: City of Anaheim 1994 & 1998; MBA 1996.							

Future Employment

SCAG's latest forecast of employment for 2000 and 2010 for each of the two geographic zones around the project area is shown in Table 5.7-3, Employment Forecasts for Two Zones Around the Project Area, 2000 to 2020. Similar to the positive employment trends from 1980 to 1990 reported in Table 5.7-1, SCAG's employment forecast represents a 13 percent increase within the City of Anaheim and 9 percent increase within the County between 1994 and 2000. Further, according to the SCAG forecasts, the ten-year period from 2000 to 2010 will see an increase in employment of 33 and 24 percent for Anaheim and the County, respectively. The twenty-year period from 2000 to 2020 is forecast to increase employment 71 percent and 53 percent for Anaheim and the County, respectively.

TABLE 5.7-3
EMPLOYMENT FORECASTS FOR TWO ZONES
AROUND THE PROJECT AREA, 2000 TO 2020

Geographic Zone	1994 Actual	2000 Forecast	2010 Forecast	2020 Forecast	Percent Change 1994 to 2000	Percent Change 2000 to 2010	Percent Change 2000 to 2020	Amount Change 2000 to 2020
City of Anaheim	182,962	206,963	274,480	354,810	+13	+33	+71	147,847
Orange County Subregion	1,262,400	1,381,697	1,717,282	2,116,556	+9	+24	+53	734,859

Source: SCAG 1998.

While the projected increases in employment over the next 20 years are anticipated to occur at a slightly slower rate than previous periods of expansion, the increases in employment are still substantial, similar to the job gains experienced in the City and County during the 1980-1990 period. The total anticipated increase in jobs for from 1994 to 2000 for Anaheim will be 24,001, while County employment will increase by 119,297. This represents an increase in employment of approximately 13 percent for the City of Anaheim and 9 percent for the County. For the period 2000 to 2020, Anaheim is projected to add 147,847 new jobs (71 percent increase), while jobs in the County will increase by 734,859 (53 percent increase).

Prior to the last economic recession, a number of factors were predicted to contribute to cause the slowing rate of job creation over the next 20 years, especially within Orange County; these include the high cost of land in the area, congestion-related costs of travel (e.g., length of time required to commute, loss of revenue producing time, and costs incurred due to delays), and an overall aging of the workforce. However, while some of these factors remain relevant to the local economy, sound economic expansion continues throughout the County and, particularly, in the City of Anaheim. Thus while the rate of expansion may not equal that experienced during the 1980 to 1990 period, overall trends remain positive for the foreseeable future.

Resident Workers

Resident workers are those persons who reside and are members of the labor force within the same geographic area. Table 5.7-4, Resident Worker Trends in Two Zones Around the Project Area, 1980 to 1990, summarizes the 1980 to 1990 trend in the number of "resident workers" in each of the two geographic zones around the Sportstown District. These data show a consistent growth trend across both geographic areas. In Anaheim, the number of resident workers increased by 10 percent over the decade.

while the Orange County Subregion experienced an increase of 40 percent. In absolute terms, the increases in resident workers range from about 12,000 additional working residents in Anaheim to about 296,000 additional working residents in the County Subregion.

TABLE 5.7-4
RESIDENT WORKER TRENDS IN TWO ZONES
AROUND THE PROJECT AREA, 1980 TO 1990

Geographic Zone	1980	1990	1980 to 1990 (Change)	
			Amount	Percent
City of Anaheim	119,707	131,438	+ 11,731	+ 10
Orange County Subregion	746,845	1,043,418	+296,573	+40

Source: City of Anaheim 1994; SCAG July 1995.

These trends indicate that in each of the geographic zones around the project area, the size of the resident labor force grew less rapidly than employment, both in absolute and percentage terms. For example, while employment grew by 18 percent in Anaheim from 1980 to 1990, the resident labor force grew at about 10 percent. In absolute terms, employment grew by about 26,000 persons while the resident labor force grew by about 12,000 persons. The more rapid growth in employment relative to the resident labor force is consistent with the continued transformation of Orange County – and in this case, Anaheim and the County Subregion – from its residential/agricultural roots into a major urban employment center that attracts employees from outside the City's boundaries.

Future Resident Workers

Projected growth in the number of resident workers to 2010 is shown in Table 5.7-5, Resident Worker Forecast for Two Zones Around the Project Area, 2000 to 2010, for each of the geographic zones around the project area. No SCAG projections beyond 2010 for resident workers are currently available. In percentage terms, the number of resident workers in the County Subregion is projected to grow 9 percent from 2000 to 2010, while Anaheim's resident labor force is expected to grow 14 percent over the same period. Over the 1990 to 2010 period, Anaheim's growth in resident workers will increase by 32 percent, outpacing resident worker growth in the County Subregion, which is projected to increase 30 percent during the same period.

TABLE 5.7-5
RESIDENT WORKER FORECAST FOR TWO ZONES
AROUND THE PROJECT AREA, 2000 TO 2010

Geographic Zone	1990 Actual	2000 Forecast	2010 Forecast	2000 to 2010 (Change)		1990 to 2010 (Change)	
				Amount	Percent	Amount	Percent
City of Anaheim	131,438	152,589	173,739	+21,150	+14	+42,301	+32
Orange County Subregion	1,043,418	1,250,455	1,361,504	+111,049	+9	+318,086	+30

Source: City of Anaheim 1994; SCAG July 1995; MBA 1996.

Population

Recent Population Size Trends

Table 5.7-6, Recent Population Trends in Two Zones Around the Project Area, 1980 to 1990, summarizes the 1980 to 1990 trend in population for the two geographic zones around the project area. The 1990 census data show that the City of Anaheim grew at approximately the same rate as the County Subregion since 1980. The Anaheim population grew by about 47,000 people (21 percent), and the Subregion grew by about 478,000 (25 percent) between 1980 and 1990. Population growth estimates between 1990 and 1994 show an increase of approximately 9 percent and 8 percent for the City and County, respectively.

TABLE 5.7-6
RECENT POPULATION TRENDS IN TWO ZONES
AROUND THE PROJECT AREA, 1980 TO 1990

Geographic Zone	1980 ^a	1990	1994	1980-1990 (Change)		1990-1994 (Change)	
				Amount	Percent	Amount	Percent
City of Anaheim	219,311	266,406	290,710	+47,095	+21	+24,304	+9
Orange County Subregion	1,932,709	2,410,556	2,595,147	+477,847	+25	+184,591	+8

^a U.S. Census Data

Source: SCAG 1998

The latest informal estimates from SCAG indicate that the current population of the City of Anaheim is 301,176 (January 1, 1998). This represents an increase of 10,466 residents or 3.6 percent from 1994.

Total population for Orange County as of January 1, 1998 is estimated to be 2,722,291 by SCAG; this represents an increase of 127,144 residents in the County or 4.9 percent of the total since 1994. Population growth rate continues near the pace of growth that took place between 1980 and 1990.

Future Population Size

Table 5.7-7, Population Forecast for Two Zones Around the Project Area, 2000 to 2020, summarizes SCAG's population projections for the 2000 to 2020 period. Growth in the City of Anaheim is projected to outpace growth within the County. Between 2000 and 2010, population in Anaheim is projected to grow by 12 percent, whereas the County as a whole is expected to grow by 9 percent. Between 2000 and 2020, the population in the City of Anaheim is expected to grow by 19 percent, while the County will grow by 13 percent. Although the rate of population growth in the SCAG forecast is expected to be somewhat moderate in each zone over the projection period, the absolute increases in population by 2020 are nonetheless substantial. Overall, Anaheim is projected to increase by 64,155 new residents between 2000 and 2020. For the County as a whole, population is projected to increase by 385,366 new residents between 2000 and 2020.

**TABLE 5.7-7
POPULATION FORECAST FOR TWO ZONES
AROUND THE PROJECT AREA, 2000 TO 2010**

Geographic Zone	2000	2010	2020	Percentage Change 2000- 2010	Percentage Change 2000-2020	Amount Change 2000-2020
City of Anaheim	335,156	375,989	399,271	+12	+19	64,115
Orange County Subregion	2,859,236	3,105,322	3,244,602	+9	+13	385,366

Source: SCAG 1998.

Population Age Distribution

Table 5.7-8, Age Distribution and Median Age Trends in Two Zones Around the Project Area, 1980 to 1990, summarizes the age distribution and median age of the population. These data show a consistent pattern of an aging population in both zones.

TABLE 5.7-8
AGE DISTRIBUTION AND MEDIAN AGE TRENDS IN TWO ZONES
AROUND THE PROJECT AREA, 1980 TO 1990

Geographic Zone	1980				1990			
	Age Distribution (Percent)			Median Age	Age Distribution (Percent)			Median Age
	0-17	18-64	65+		0-17	18-64	+65	
City of Anaheim	27	65	8	28.8	26	66	8	28.9
Orange County Subregion	27	65	8	29.5	24	67	9	30.4
Source: City of Anaheim 1994.								

Although there are no known projections of the population age distribution to 2010 available at the city and census tract levels, two such projections have been made for Orange County. Both projections suggest that the aging trend in the population from 1980 to 1990 (described below) is likely to continue, but at a slower rate. Woods & Poole Economics, an econometric and demographic forecasting group, projects that the median age of the population in Orange County will increase from 30.4 years in 1990 and to 36.4 years in 2010. Furthermore, their projections indicate that the percentage of persons between 20 and 64 will fall from 63.4 percent in 1990 to 62.9 percent in 2010 (Woods & Poole, 1990).

Housing

Table 5.7-9, Recent Housing Stock Trends in Two Zones Around the Project Area, 1980 to 1998, summarizes the past trend in the age and amount of housing stock in each of the two geographic zones around the project area. These data show that the percentage increases in the size of the housing stock for the County as a whole has outpaced the increase occurring in the City of Anaheim from 1980 to 1998. While the housing stock increased in the County by 21 percent between 1980 and 1990, and 9 percent from 1990 to 1998, the housing stock in the City of Anaheim for these same periods have increased by 13 percent and 6 percent, respectively. Nevertheless, vacancy rates in the City of Anaheim are slightly higher than County rates (6.0 percent for the City compared to 5.6 percent for the County).

**TABLE 5.7-9
RECENT HOUSING STOCK TRENDS IN TWO ZONES
AROUND THE PROJECT AREA, 1980 TO 1990**

Geographic Zone	1980 ^a	1990 ^a	1998 ^b	1980 to 1990 (Change)		1990 to 1998 (Change)		Percentage of Units Vacant (1998)
				Amount	Percent	Amount	Percent	
City of Anaheim	82,647	93,177	98,852	+10,530	+13	+ 5,675	+6	6.0
Orange County Subregion	721,514	875,072	954,038	+153,558	+21	+78,966	+9	5.6
^a Actual, based on Census data.								
^b SCAG 1998.								
Source: City of Anaheim, 1994 and 1998.								

SCAG's forecast of housing construction in the two geographic zones is shown in Table 5.7-10, Housing Construction Forecast for Two Zones Around the Project Area, 2000 to 2010. The housing unit counts for 1990 and 2000 are based on the SCAG Growth Management Plan forecast for 1990 to 2010.

City housing programs are discussed in Section 5.1, Land Use and Related Planning Programs, of this EIR.

**TABLE 5.7-10
HOUSING CONSTRUCTION FORECAST FOR TWO ZONES
AROUND THE PROJECT AREA, 2000 TO 2010**

Geographic Zone	2000	2010	2000 to 2010 (Change)		1990 to 2010 (Change)	
			Amount	Percent	Amount	Percent
City of Anaheim	105,992	119,418	+13,426	+13	+26,241	+28
Orange County Subregion	1,005,000	1,092,000	+87,000	+9	+217,000	+25
Source: City of Anaheim 1994.						

5.7.2 ENVIRONMENTAL IMPACTS

Thresholds of Significance

An impact is considered to be significant if the project will:

- Hinder or reduce employment opportunities.
- Induce substantial growth or concentration of population beyond which could be accommodated by the affected cities and communities.
- Conflict with adopted environmental plans and goals of a community.
- Create demand for housing that exceeds the available supply.

Employment

Implementation of the MLUP will directly add new jobs as a result of construction and operation. The proposed plan is not expected to generate significant growth in the job market beyond the growth assumed in regional plans and local plans. For example, implementation of the MLUP would result in approximately 2.8 msf of development in addition to existing uses, whereas the existing General Plan land use designations allows for approximately 10 msf of development in addition to existing uses.

This project will also induce new jobs as a result of income spent by workers filling these direct jobs, resulting in indirect employment, to the extent that direct employment leads to local purchases of materials and services. Indirect and induced employment impacts are not directly related to or under the control of the City of Anaheim. Indirect and induced employment impacts result from the actions and decisions of businesses, workers, and households that benefit from the demand for goods and services required to construct, develop, and maintain businesses within Anaheim. The additional employment generated by the future development is considered a beneficial impact to job growth in Anaheim and the region.

Table 5.7-11, Estimated Net Employment From the Anaheim Stadium Master Land Use Plan, presents an estimate of the number of new jobs that will be created as a result of implementation of the project. As shown, development of the proposed project will create a net increase of 5,320 new jobs. These potential job opportunities are equivalent to approximately 44 percent of the total number of jobs that were created between 1990 and 1994 in the City of Anaheim. A substantial number of jobs would be dislocated due to the removal of the existing industrial uses in the Katella Corridor District and the Gateway District. Specifically, an estimated 660 employees associated with 618,165 sf of industrial uses will become dislocated. However, some of these job losses may be offset by the addition of 135 jobs anticipated from the development of 126,862 sf of industrial development in the Existing District of the MLUP. Thus while project implementation is anticipated to generate approximately 5,980 new full time jobs, the net increase in employment will be 5,320. New jobs induced by implementation of the MLUP will be created over an approximate 20-year period.

TABLE 5.7-11
ESTIMATED ADDITIONAL EMPLOYMENT FROM THE
ANAHEIM STADIUM MASTER LAND USE PLAN

Land Use	Employment Generation Factor ^a	Additional Employment
Office (1,871,285 sq ft)	463 sq ft/employee	4,042
Hotels (900 Rooms) ^b	1.11/room	1,001
Urban Entertainment/Retail (452,026 sq ft)	564 sq ft/employee	802
Industrial (-618,165 sq ft, +126,862 sq ft)	936 sq ft/employee	-660/+135
Total Employment Generated	--	5,980
Net Employment Increase	--	5,320
^a Based on Orange County data supplied by SCAG.		
^b Assuming 1,100 sq ft of development per room, based on 991,603 sq ft of proposed hotel uses.		
Source: SCAG 1998, Michael Brandman Associates 1998.		

Since SCAG projections are based on full-time employment numbers, for the purposes of this analysis, full-time employment numbers will be used to determine potential impacts. Implementation of the MLUP will occur over an approximately 20-year period of time. Of the 147,847 jobs projected by SCAG to be created in the City of Anaheim between 2000 and 2020 (refer to Table 5.7-3), the net increase of 5,320 year-round jobs from implementation of the MLUP represents approximately 4 percent of that total. The jobs generated from the MLUP represent less than 1 percent of the employment forecasted by SCAG for the County between 2000 and 2020.

Approximately 68 percent of total employment generated by the MLUP project area will be from office uses. Hotel uses account for about 17 percent of the anticipated employment opportunities of the project, while retail uses represent approximately 13 percent of the total. Industrial uses account for approximately 2 percent of the employment generated by the project, but these gains will be negated by conversion of industrial uses elsewhere in the project area. It is likely that the majority of the employees would be found in the subregional resident labor force. The implementation of the project is not expected to induce significant migration into Southern California or substantially increase intra-urban migration, as unemployment in Anaheim is comparable to that of the State and the SCAG region. In addition, many positions in entertainment/retail businesses (especially retail trade and restaurants and bars) will use student and part-time employees.

In addition to the net increase of 5,320 year-round jobs to be generated from development of the project, indirect employment in other economic sectors will result, including jobs in the retail, commercial, and industrial sectors. Further, the construction of projects to be developed under the MLUP would provide construction job opportunities. This is considered a beneficial impact. Construction employees typically do not permanently relocate for a project due to the temporary nature of construction. Further,

construction employment will be gradual as individual development projects are constructed over time. These types of jobs are, therefore, not expected to result in significant impacts on population or housing growth in the area.

Population

No residential development is proposed. Therefore, the project will not result in a direct increase in population in Anaheim or the County Subregion. To the extent that employees associated with development within the project area results in net new households in the area, a direct increase in population would occur. As noted in the Housing Impacts discussion below, this population increase is not expected to result in significant housing impacts.

As previously noted, it is estimated that a total of 5,980 new year-round employment opportunities would be generated by the implementation of the MLUP. Of that, 4,042 new employees are expected to work within the office uses planned for the project area. Of the 4,042 office employees, 75 percent are expected to be primary wage earners, and in a position of making a decision of whether to relocate for a job opportunity. Approximately 25 percent of the primary wage earners are expected to relocate to Anaheim for employment. This will result in 758 new residents/households from office employment.

Implementation of the MLUP is expected to result in 1,803 new employees working in the hotel and entertainment/retail uses within the project area. Based on a survey of employment and housing for the Disneyland Resort Environmental Impact Report (MBA 1992), it is estimated that 42 percent of the employees would be primary wage earners and in a position of making a decision of whether to relocate for a job opportunity. Approximately 13.3 percent of the primary wage earners are expected to relocate to Anaheim for employment within the MLUP area. These relocations would result in 101 new area residents/households from hotel and entertainment/retail employment.

As indicated previously, the project will result in a decrease of industrial jobs as industrial land uses are redeveloped by individual property owners under the MLUP. The conversion of 618,165 square feet of industrial uses in the project area would result in the loss of 660 industrial related jobs in the project area. However, some of these losses would be offset by the development of 126,862 square feet of industrial elsewhere in the project area, resulting in the generation of approximately 135 new jobs. Further, many of these workers could be absorbed by other related industries either within Anaheim or in the surrounding area. Thus, as a conservative approach to population analysis, no decrease in population is anticipated as a result of the conversion of industrial land uses.

Implementation of the MLUP can, therefore, be expected to add a total of 859 new households to the City of Anaheim associated with relocated workers from office, hotel, and retail/entertainment-related uses. Assuming only one new employee per household, at the City average of 3.195 persons per

household, approximately 2,745 new residents would be anticipated from implementation of the MLUP. This represents approximately four percent of the population increase forecast by SCAG for the City of Anaheim between 2000 and 2020 (refer to Table 5.7-7). Further, this amount is less than one percent of the increase forecast by SCAG for the Orange County Subregion. Implementation of the MLUP would, therefore, not result in a substantial impact to population in the City or County and no significant effects would result.

Housing Impacts

As previously noted, the project does not include the construction of any new dwelling units and no existing residential units would be removed. The projected indirect employment increase generated by development of the MLUP may result in an increase in the demand for housing within the City of Anaheim. The potential impact of increased employment on housing is discussed below.

The additional employment opportunities generated by implementation of the MLUP are not anticipated to attract a substantial number of employees from outside the Subregion (i.e., outside Orange County). However some of the positions that will be created may require a high level of skill or education unavailable among resident workers in the City and County Subregion. Further, these employment opportunities may encourage a number of workers within the region or County Subregion to move into the City of Anaheim to be closer to their place of employment. As described above, a number of factors affect a household's decision to relocate, including whether the employee is a full- or part-time worker and is a primary or secondary wage earner within the household. It is projected that implementation of the MLUP would result in 859 new employees moving to Anaheim from outside the City.

Assuming one new employee per household, the new employees moving to Anaheim would result in an increased demand for 859 housing units over the anticipated 20-year implementation time of the MLUP. This demand for housing units represents just over 3 percent of the projected increase in the City's housing stock from 1990 to 2010 and less than 1 percent of the total number of housing units projected for the City in 2010. The current vacancy rate of 6 percent for the City indicates the availability of approximately 5,931 dwelling units (refer to Table 5.7-9). Therefore, based on the anticipated demand for housing compared to projected and current housing availability, the project's induced demand for housing is not anticipated to cause a significant effect on the City's housing supply.

5.7.3 CUMULATIVE IMPACTS

The study area for employment, population, and housing is the City of Anaheim which is located in the Orange County Subregion, as identified by SCAG.

One way to analyze potential employment effects on the related projects is to use commonly accepted density factors (e.g., employees per square foot of development use or per room for hotels/motels). Using this methodology and specific employment numbers provided in the Disneyland Resort EIR and by SCAG, it is estimated that the implementation of the related projects would generate approximately 19,515 new jobs. The estimated employment generated by these projects is within the SCAG forecasts of an increase of 67,517 new jobs in Anaheim and 335,585 new jobs in the County Subregion between 2000 and 2010.

Employment opportunities created by implementation of the MLUP together with related projects are expected to be 24,835 new jobs. Comparing the total cumulative employment with SCAG forecasts indicates that the total cumulative employment represents 9.0 percent and 1.5 percent of the total estimated employment in the City of Anaheim and County Subregion, respectively, for the year 2010. Further, total cumulative employment equates to approximately 37 percent and 7 percent of the 2000 to 2010 employment growth forecast for the City of Anaheim and County Subregion, respectively. Thus, the total number of jobs that would be created by implementation of the MLUP along with the related projects is within SCAG projections for the City of Anaheim and the County Subregion.

Because no dwelling units are proposed as part of the MLUP or related projects, no direct increase within Anaheim or the County Subregion would occur. An indirect increase in population would occur due to employee relocation.

The cumulative increases in employment, housing, and population associated with the MLUP and related projects are within the SCAG forecasts. Therefore, these impacts are less than significant.

5.7.4 MITIGATION MEASURES

Existing City policies and the activities of the City of Anaheim Housing Authority provide for the housing needs of the City. No mitigation measures are provided because no significant impacts on the provision of necessary levels of housing are anticipated. The City's housing needs for all income levels are accommodated through the programs and policies of the General Plan Housing Element. The General Plan Housing Element was last amended in 1990 and is currently scheduled to be updated in 1999.

5.7.5 SIGNIFICANT UNAVOIDABLE ADVERSE IMPACTS

There will be no significant unavoidable adverse impacts of the project related to employment, population, and housing.

5.8 PUBLIC SERVICES, UTILITIES, AND ENERGY CONSUMPTION

This section provides baseline information on, and evaluates potential impacts to, public services, utilities, and energy conservation practices and policies related to the development of the Anaheim Stadium Area MLUP. Information provided in this section is based on correspondence with, and information provided by, the public services and utilities providers having jurisdiction over the project site. The energy consumption rates are based on information provided in the 1993 SCAQMD Air Quality Handbook.

5.8.1 FIRE AND EMERGENCY/MEDICAL SERVICES

Environmental Conditions

Fire and emergency/medical services for the MLUP area is provided through the City of Anaheim Fire Department.

Fire Prevention

The City of Anaheim Fire Department's fire prevention, inspection and permit services are provided through the fire companies located in Fire Stations 1, 3, and 7, and through the Department's Fire Prevention Division (FPD). The FPD currently has one inspector assigned to the Stadium and Convention Center area. Hazardous materials disclosure and underground storage tank activities are also handled through the FPD.

Fire and Emergency/Medical Services

The Anaheim Fire Department provides fire protection emergency medical response services for the Anaheim Stadium Area MLUP site. Three fire stations provide primary service to the project site (Exhibit 5.8-1).

- Fire Station 1 is located at 500 East Broadway Street. It houses one four-person paramedic/suppression unit, one four-person suppression unit, and one four-person squad unit (light/air supply).
- Fire Station 3 is located at 1717 South Clementine Street. It houses one four-person paramedic/suppression unit, one quint ladder truck (ladders, pump, and water tank), and one battalion chief (field supervisor).
- Fire Station 7 is located at 2222 East Ball Road. It houses one four-person paramedic/suppression unit.

Anaheim Fire Department station locations, equipment, and personnel serving the project area are summarized in Table 5.8-1.

**TABLE 5.8-1
EXISTING FIRE STATION LOCATIONS, EQUIPMENT, AND STAFFING**

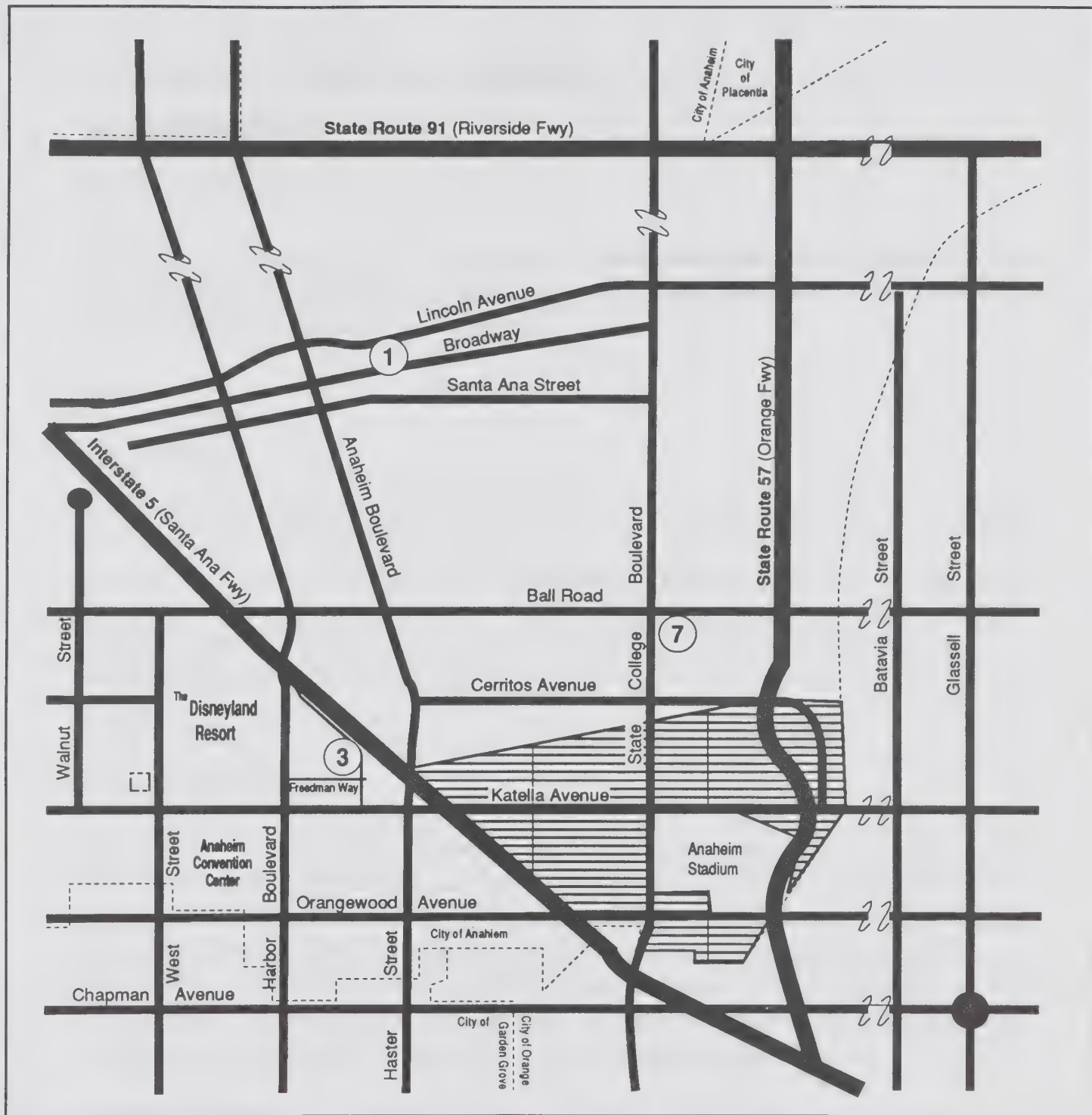
Fire Station	Location	Equipment	Personnel
Fire Station 1	500 East Broadway	1 paramedic/suppression unit 1 suppression unit 1 squad unit	12
Fire Station 3	1717 South Clementine	1 paramedic/suppression unit 1 quint ladder truck (ladders, pump, water tank) 1 battalion chief vehicle	9
Fire Station 7	2222 East Ball Road	1 paramedic/suppression unit	4
Source: City of Anaheim Fire Department, August 1998.			

The Anaheim Fire Department is a party to the Orange County and California State Mutual Aid Agreement. The Department has automatic aid agreements with all of Anaheim's neighboring jurisdictions. Additional fire and emergency medical response services are provided to the project site by the City of Orange Fire Station 6, located at 345 City Drive South, through an automatic aid agreement. As part of their involvement with the California Office of Emergency Services (OES), the Anaheim Fire Department also provides for light urban search and rescue services, such as swift water rescue, high-angle (building and mountain) rescue, and other specialized search and rescue activities (building collapse, etc.); and has emergency medical services response capability.

Response time standards for the Anaheim Fire Department require first engine response within 5 minutes to 90 percent of all incidents and 8 minutes to the remaining 10 percent. In addition, the Department requires a maximum of 10 minutes for truck company response to 100 percent of all incidents. Based on the equipment and staffing listed in Table 5.8-1 current needs are being met.

Fire Flow

According to the Anaheim Fire Department, the required fire flow for the project site is approximately 5,000 gallons per minute (gpm). The adequacy of the existing water system and fire flow availability for the project site is discussed in Section 5.8.6.



SOURCE: City of Anaheim, August 1998.

LEGEND



Project Site

③

Fire Station Number



Michael Brandman Associates

19870002 • 8/98

Exhibit 5.8-1 Fire Station Location Map

ANAHEIM STADIUM AREA MASTER LAND USE PLAN EIR

Environmental Impacts

Thresholds of Significance

A project is considered to have a significant impact to fire and emergency services if the project will result in a substantial need for fire and medical emergency assistance that cannot be adequately met by available Fire Department personnel or equipment.

Impacts

Fire Prevention

With the proposed project, fire prevention services provided by the City of Anaheim Fire Department will be continued for the project site. The Anaheim Fire Department will continue to provide necessary fire prevention inspection, fire permit, hazardous materials disclosure, and underground storage tank services, particularly during future development project construction phases. In addition, complaints, trade shows inspections, hazardous materials spills, special event permits, investigations, and business license inspections are some of the other types of fire prevention activities that will continue.

Fire and Emergency Services

Implementation of the proposed project would induce additional development and is expected to result in an increase in the number of fire and medical service calls in the local area. The Anaheim Fire Department has indicated that the existing fire staff and equipment resources may not be sufficient to adequately accommodate the increase in service calls generated by the proposed project (Wilder, pers. comm., 1998). Increased population, density and usage generated by the proposed project may increase the need for emergency medical services, ambulance transportation, and rescue operations, which may require additional fire equipment and fire station modification or relocation.

Cumulative Impacts

The study area for cumulative fire and emergency/medical service impacts consists of the project site and the service areas for Fire Station 1, 3, and 7.

According to the City of Anaheim Fire Department, no significant impacts would occur on fire and emergency/medical services as a result of the project alone. Moreover, a major portion of the planned future development within the City will occur in the Anaheim Resort. Measures have been incorporated into the Anaheim Resort Specific Plan that would ensure, as this area is developed,

adequate fire and emergency/medical services will be provided; therefore, no significant cumulative impacts are expected to occur related to fire and emergency/medical services.

Mitigation Measures

Mitigation Measure 8.1-1. Prior to approval of the Grading Plan, the property owner/developer shall submit an emergency fire access plan to the Fire Department for review and approval to ensure that service to the site is in accordance with Fire Department requirements.

Mitigation Measure 8.1-2. Prior to the issuance of each building permit, plans shall indicate that all buildings shall have fire sprinklers installed by the property owner/developer in accordance with the Anaheim Municipal Code. Said sprinklers shall be installed prior to each final building and zoning inspection.

Mitigation Measure 8.1-3. Prior to commencement of structured framing onsite, fire hydrants required shall be installed and charged by the property owner/developer, as required and approved by the Fire Department.

Mitigation Measure 8.1-4. Prior to the issuance of each building permit, the property owner/developer shall submit a Construction Fire Protection Plan, which shall include detailed design plans for accessibility of emergency fire equipment, fire hydrant location, and any other construction features required by the Fire Marshal. The property owner/developer shall be responsible for securing facilities acceptable to the Fire Department and hydrants shall be operational with require fire flow.

Mitigation Measure 8.1-5. Prior to approval of street improvement plans, the water supply system shall be designed by the property owner/developer to provide sufficient fire flow pressure and storage for the proposed land use and fire protection in accordance with Fire Department requirements.

Significant Unavoidable Adverse Impacts

With implementation of the mitigation measures described above, no significant unavoidable adverse impacts on fire and emergency services are anticipated.

5.8.2 POLICE SERVICES

Environmental Conditions

Police services for the project site are provided by the Anaheim Police Department located at 425 South Harbor Boulevard. In addition, helicopter operations are conducted from the Police Heliport

located at 901 East Vermont Avenue. For police protection purposes, the City of Anaheim is divided into service areas of various sizes. The City of Anaheim is divided into five sectors, which are comprised of smaller units called Reporting Districts. The project site is located within Sector 3 (Exhibit 5.8-2).

Manpower and Equipment Resources

On a 24-hour basis, manpower available throughout the jurisdiction include 83 officers and 12 sergeants. Currently, manpower serving the project site during any 24-hour period include 10-12 officers. The equipment available to the Sector 3 includes 10-12 patrol vehicles (over any 24-hour period), helicopters, motorcycles, and stakebed trucks. Currently, the Police Department is operating at a level of 1.29 officers per 1,000 population, which is below the department goal of maintaining 1.5 officers per 1,000 population.

Response Statistics

Currently, the approximate average response time of patrol units to Priority 1 emergency calls throughout the jurisdiction including the project site is an average of 5.1 minutes. The response times for non-emergency Priority 2 and Priority 3 are an average of 7.4 minutes and 16.8 minutes, respectively (Gaston, pers. comm., 1998).

According to the Police Department, principal crimes reported throughout the jurisdiction include Part I crimes (consisting of homicide, rape, robbery, assault with a deadly weapon, burglary, larceny, vehicle theft, arson) and Part II crimes (consisting of all other crimes). The types of crimes reported in the project area include petty theft, burglary, vandalism, etc. The area is not considered a "high crime" area, although most perpetrators of crimes in the area tend to be transient in nature, making it difficult to track statistics (Gaston, pers. comm., 1998).

Mutual Aid Agreement

The City of Anaheim has a Mutual Aid Agreement with the majority of the other cities in Orange County as well as the Orange County Sheriff's Department. This Inter-City Police Assistance Plan was adopted by the Orange County Chiefs of Police and Sheriff's Association on November 5, 1986. The plan provides for inter-agency assistance and cooperation during "local" police incidents. It comprises three different responses depending upon the nature of the assistance requested. One of the responses ("Code Alex") simply assigns observation posts; the remaining two responses ("Code Charlie" and "999") involve actual assignment of law enforcement personnel to a law enforcement problem.

Environmental Impacts

Thresholds of Significance

A project is considered to have a significant impact relative to police services if:

- Increases in development, population, size of events, or response times would require expanding the existing staff and equipment levels to maintain an adequate level of protection through the service area.
- A substantial amount of police emergencies that cannot be adequately served by available Police Department personnel or equipment.

Impacts

Implementation of the MLUP would result in indirect increases in the number of visitors and employees within the project site and surrounding area, thereby generating an increase in the level of service calls from the project site. These calls are anticipated to result from an increase in traffic on adjacent streets and arterials and an increase in transient occupancy that would require responses to thefts, vehicle burglaries, damage to vehicles, traffic-related incidents, and crimes against persons.

According to the City of Anaheim Police Department, no significant impacts would occur on police protection services as a result of the project. Moreover, a majority of the future development within the City will occur in the Anaheim Resort Specific Plan area. Measures have been incorporated into this project that would ensure that, as this area is developed, adequate police protection services will be provided; therefore, no significant impacts are expected to occur related to police protection services.

Cumulative Impacts

The study area for cumulative police protection service impacts consists of the project site and the remainder of Sector 3.

According to the City of Anaheim Police Department, no significant impacts would occur on police protection services as a result of the project. Measures have been incorporated into this project that would ensure as this area is developed, adequate police protection services will be provided; therefore, no significant cumulative impacts are expected to occur related to police protection services.



SOURCE: City of Anaheim Police Department, October 1995.

LEGEND



Project Site



Sector 3

Mitigation Measures

Mitigation Measure 8.2-1. Prior to the approval of the final site plan and issuance of each building permit, the property owner/developer shall submit plans to the Police Department for review and approval for the purpose of incorporating safety measures in the project design including the concept of crime prevention through environmental design (i.e., building design, circulation, site planning, and lighting of parking structure and parking areas).

Mitigation Measure 8.2-2. Prior to the issuance of each building permit for a parking structure, the property owner/developer shall submit plans to the Police Department for review and approval indicating the provision of closed circuit monitoring and recording or other substitute security measures as may be approved by the Police Department. Said measures shall be implemented prior to final building and zoning inspections.

Mitigation Measure 8.2-3. Prior to the issuance of each building permit, the property owner/developer shall submit design plans that shall include parking lots and parking structures with controlled access points to limit ingress and egress if determined to be necessary by the Police Department, and shall be subject to the reviews and approval of the Police Department.

Mitigation Measure 8.2-4. If the Anaheim Police Department or Anaheim Traffic Management Center (TMC) personnel are required to provide temporary traffic control services, the property owner/developer shall reimburse the City, on a fairshare basis, if applicable, for reasonable costs associated with such services.

Significant Unavoidable Adverse Impacts

With implementation of the mitigation measures described above, no significant unavoidable adverse impacts on police services are anticipated.

5.8.3 SOLID WASTE DISPOSAL SERVICE

Environmental Conditions

Regional Setting

The City of Anaheim Department of Public Works developed a Solid Waste Management Plan to comply with the California Integrated Waste Management Act of 1989 (Cal. Health and Safety Code 40000). This law requires cities and counties within California to reduce waste generation by a minimum of 25 percent by 1995 and 50 percent by the year 2000 through a combination of solid waste

management, source reduction, recycling, composting, and market development. Collection and recycling programs are currently underway in the residential areas of the City and are proposed for commercial areas in the future. "Recycle Anaheim" is a program administered by Anaheim Disposal, Incorporated and has been implemented on a mandatory basis for single-family residences only. Commercial/retail and industrial businesses also participate in this program on a voluntary basis.

All of the solid waste generated in Anaheim is currently disposed of at the Olinda-Alpha Landfill, located in unincorporated Orange County and within the City of Brea's Sphere of Influence. The landfill is permitted to receive 8,000 tons of solid waste per day excluding asphalt or soil (Grogan, pers. comm., 1995). In 1987, the Orange County Board of Supervisors authorized a two-phase process to identify sites for additional Class III (nonhazardous) solid waste disposal capacity and future integrated waste management facilities for north Orange County. The Phase I NOCLATS report was completed in 1989. This study involved the identification and comparative evaluation of 16 candidate landfill sites in north Orange County and four alternative waste management technologies. Information presented in the Phase I report resulted in the selection by the Board of Supervisors of four primary sites and two alternative technologies which were assessed in the EIR prepared for the NOCLATS report. On March 10, 1992, the Orange County Board of Supervisors certified the Final EIR for the North Orange County Landfill and Alternative Technologies Study (NOCLATS) project and approved the expansion of the Olinda Alpha Landfill. This landfill site is projected to remain in operation until the year 2013.

Local Setting

Solid waste generated by existing uses within the project site is collected and disposed of by Anaheim Disposal, Incorporated, which serves the City of Anaheim (Westlang, pers. comm., 1998). In 1996, the Orange County Board of Supervisors approved the Countywide Integrated Waste Management Plan (CIWMP). The CIWMP contains future solid waste disposal demand based on County population projections for 30 years. In addition, the City of Anaheim has a contract with the County of Orange Integrated Waste Management Department to dispose of all solid waste to the County landfill system, not one landfill in particular (Kondru, pers. comm., 1998).

Environmental Impacts

Thresholds of Significance

A project is considered to have a significant impact on solid waste facilities (i.e. landfill) if the existing facilities do not have adequate capacity for the increase in solid waste, or if the disposal of project-related solid waste would result in a reduction in the planned life-span of a landfill.

Impacts

Construction of the future development projects within the project site will involve site preparation activities and demolition, which will generate waste materials. Hauling and disposal of these materials will occur during the construction process of individual development projects located within the project site.

Following completion and occupancy of the development projects within the project site, refuse will be regularly generated. As indicated in Table 5.8-2, project implementation would generate an estimated 8,287.7 tons of solid waste annually.

TABLE 5.8-2
PROJECTED YEARLY SOLID WASTE GENERATION

Proposed Uses	Additional Employment (see Table 5.7-1)	Disposal Rate (tons/employees/year)	Solid Waste Generation (tons/year)
Industrial	-525	1.9	-997.5
Office	4,042	2.0	8,084
Retail	802	1.8	1,443.6
Hotel	1,001	1.2	1,201.2
Total Project Solid Waste Generation			9,731.3
Disposal rates derived from the California Integrated Waste Management Board (May 1997)			
Source: Michael Brandman Associates, August 1998.			

The waste generated by the proposed project would represent a small percentage of the remaining capacity in the County landfill system (Richmond, pers. comm., 1998). Implementation of the City's Solid Waste Management Plan and mitigation measures included herein will help extend the life of landfills and substantially reduce the impact of future development projects within the project site. Solid waste will be collected and disposed of by Anaheim Disposal Incorporated, or other contractors designated by the City, at the appropriate landfill sites.

Cumulative Impacts

The study area for cumulative impacts to solid waste is the service area of the Olinda-Alpha Landfill.

Based on generation factors for specific land use types (e.g., office, retail, hotel, etc.), the related projects will generate an estimated 32,540 tons of solid waste annually. The proposed MLUP plus related projects, identified in Table 4-1, will cumulatively generate approximately 40,828 tons of solid waste per year.

While the quantity of solid waste produced is expected to be a significant impact on the current landfill system, the City of Anaheim has completed Solid Waste Management Plan, which will reduce solid waste by 50 percent by the year 2000. It is anticipated that the implementation of such plans throughout the region will extend the life of local landfills. It can reasonably be assumed that all related projects, as well as the MLUP, will be required to execute programs designed to limit the amount of solid waste sent to the landfill, thus reducing the level of any cumulative impacts; however, the cumulative impacts will still be significant.

Mitigation Measures

Mitigation Measure 8.3-1. Prior to issuance of each building permit, the property owner/developer shall submit project plans to the Street and Sanitation Division of the Public Works Department for review and approval to ensure that the plans comply with AB 939, and the Solid Waste Reduction Act of 1989, and the County of Orange and City of Anaheim Integrated Waste Management Plans as administered by the City of Anaheim. Implementation of said plan shall commence upon occupancy and shall remain in full effect as required by the Street and Sanitation Division and may include, at its discretion, the following plan components:

- Detailing the locations and design of onsite recycling facilities.
- Providing onsite recycling receptacles to encourage recycling.
- Participating in the City of Anaheim's "Recycle Anaheim" program or other substitute program as may be developed by the City.
- Facilitating paper recycling by providing chutes or convenient locations for sorting and recycling bins.
- Facilitating cardboard recycling (especially in retail areas) by providing adequate space and centralized locations for collection and bailing.
- Facilitating glass recycling (especially from restaurants) by providing adequate space for sorting and storing.
- Providing trash compactors for nonrecyclable materials whenever feasible to reduce the total volume of solid waste and the number of trips required for collection.
- Providing on-site recycling receptacles accessible to the public to encourage recycling for all businesses, employees, and patrons where feasible.
- Prohibiting curbside pick-up.
- Ensuring hazardous materials disposal complies with federal, state, and city regulations.

Mitigation Measure 8.3-2. On-going during project operations, the following practices shall be implemented, as feasible, by the property owner/developer:

- Usage of recycled paper products for stationery, letterhead, and packaging.
- Recovery of materials, such as aluminum and cardboard.
- Collection of office paper for recycling.
- Collection of polystyrene (foam) cups for recycling.
- Collection of glass, plastics, kitchen grease, laser printer toner cartridges, oil, batteries, and scrap metal for recycling or recovery.

Mitigation Measure 8.3-3. Prior to issuance of a demolition permit, the property owner/developer shall submit a Demolition and Import/Export Plans, if determined to be necessary by the Public Works Department, Traffic Engineering Division and/or Street and Sanitation Division. The plans shall include identification of offsite locations for material export from the project and options for disposal of excess material. These options may include recycling of materials onsite, sale to a broker or contractor, sale to a project in the vicinity or transport to an environmentally cleared landfill, with attempts made to move it within Orange County. The property owner/developer shall offer recyclable building materials, such as asphalt or concrete for sale or removal by private firms or public agencies for use in construction of other projects, if all cannot be reused on the project site.

Significant Unavoidable Adverse Impacts

Implementation of the mitigation measures is anticipated to substantially reduce the amount of solid waste produced by the project; however, because of the limited landfill capacity, the impact to landfill capacity is expected to remain significant.

5.8.4 PARKS

Environmental Conditions

Park and recreational uses are maintained by the Anaheim Community Services Department (the “Department”).

The Department has identified Boysen Park, a 24.6-acre community park, approximately 1.5 miles from the project site. Boysen park includes a non-lighted softball field/soccer field, a lighted baseball/soccer field, a non-lighted soccer field, two play equipment areas, two volleyball courts,

picnic facilities, two restrooms, landscaping, and parking. In addition, an 8-acre concessionaire-operated tennis facility with 12 tennis courts and several practice walls is available onsite.

Ponderosa Park, a 9-acre neighborhood park, is approximately 0.9 miles from the project site and contains a lighted softball/soccer field, a 4,000 square foot neighborhood center, volleyball court, two lighted basketball courts, two parking lots, a play equipment area, landscaping, picnic areas, and a maintenance yard.

Juarez Park is a 9.5-acre neighborhood park located approximately 1.6 miles from the project site and contains a play equipment area, a non-lighted softball/soccer field, picnic areas, landscaping, and parking (shared with the adjacent library).

The Parks, Recreation, and Community Service Element of the City's General Plan (GPA 325) identifies park acreage and facility deficiencies. The City attempts to maintain a ratio of 2 acres of parkland per 1,000 population. Based upon this standard, the population in the year 1994 (290,915 persons) generated a demand for 581.8 acres of parkland. The estimated parkland demand in the year 2010 (based upon 370,456 persons) is 740.9 acres. Currently, the City of Anaheim has a total of 521 acres of developed local parkland. Therefore, there is a current parkland deficit of 219.9 acres. This deficit is projected to increase to 84.4 acres by the year 2010 (Anaheim Parks, Recreation, and Community Service Element, 1992). Additionally, the demand for the use of baseball fields is greater than the availability at peak usage periods.

Currently, there are no programmed expansion plans for parks and recreational facilities within the project area.

Environmental Impacts

Thresholds of Significance

A project is considered to have a significant impact on park facilities if existing facilities are not adequate to serve proposed land uses.

Impacts

Since implementation of the MLUP does not involve the construction of new dwelling units, no direct increases in population for the City of Anaheim would result. Therefore, project implementation would not result in any direct impacts on park, recreation, and/or community facilities.

According to the Department, project implementation would indirectly affect parks nearby the project site by users visiting the project area (Mayer, pers. comm., 1998). This would likely occur before or after the venue being visited by hotel visitors in the area. Employees of the commercial facilities in the project area may also contribute to the demand. However, this contribution is not considered to be substantial in nature; therefore, no significant adverse impacts are expected to occur to the City's park facilities with project implementation.

Cumulative Impacts

The cumulative study area for the assessment of park impacts is the City of Anaheim.

Parks are developed in the City of Anaheim on an as-need basis. The City has identified an existing deficiency in parkland. There are no housing units proposed in connection with related projects that will directly generate additional demand for park sites. Additional housing and employment associated with the nonresidential related projects is anticipated. Most of the related projects are located within west Anaheim, an area considered by the City to be deficient in park facilities. Therefore, development of the related projects will result in a significant cumulative impact on parks; however, the proposed project does not contribute to the existing parkland deficiency and, therefore, will not contribute to impacts from other projects.

Mitigation Measures

As there will be no negative impact to parks created by approval of the proposed project, no mitigation measures are required.

Significant Unavoidable Adverse Impacts

No significant adverse impact on park and recreational resources is anticipated from implementation of the proposed project.

5.8.5 SCHOOLS

The school impact analysis was based on enrollment and capacity data provided by the Anaheim Union High School District (AUHSD) and the Anaheim City School District (ACSD). The schools analysis is in The Disneyland Resort Specific Plan EIR; and the Anaheim Resort Specific Plan EIR. The City also has reviewed and analyzed additional information provided by the school districts for this, as well as previous projects, including:

1. The "Anaheim Union School District Comprehensive Study of Impact of Development on the School Districts and Fee Program Justification" (February 4, 1994) prepared by Recht, Hausrath & Associates (RH&A), required as a condition to collection of statutory developer fees.
2. The "Comprehensive Study of the Impact Development on the School Districts and Fee Program Justification," March 1992, prepared by Recht, Hausrath & Associates (RH&A).
3. The "Critique of The Disneyland Resort Specific Plan Draft Environmental Impact Report and Analysis of Impact on Anaheim City School District.
4. "Development Fee Justification Analysis for Residential Development, Commercial/Industrial Development and Senior Housing" prepared for the Anaheim City School District, April 1993, and prepared by School Planning Services.

Where applicable, the information contained in this section of the report reflects information based on the final analysis presented in the Anaheim Sports Center Final EIR, May 1996.

The DEIR does not explicitly discuss the project's impacts on any school district other than the ACSD and AUHSD because:

1. There is no potential for direct project impacts because the project does not include any new residential development. Additionally, each school district may restrict the number of inter-district transfers (employees who enroll their children near their place of employment) to conform with available student seating capacity.
2. Under applicable state law, any potential indirect impacts that may occur as a result of project-generated employees relocating to new housing units within other school districts would be mitigated through the imposition of developer fees on construction of such new housing units.
3. Estimates of indirect impacts of project-generated employees who relocate to existing housing units within other school districts are speculative at best and, therefore, cannot be reasonably analyzed in this EIR.
4. Based on the estimated distribution of project-generated employee households throughout the study area, as described in this analysis, and the size and location of the school district, it is reasonable to predict that the impact of project-generated employee households relocating to within the boundaries of the district will be negligible. However, this issue is addressed in this section.
5. Each school district outside the ACSD and AUHSD area will receive school fees from any new residential units that may be constructed within that district's boundaries.

The methodology used to calculate the potential impacts of the proposed project on the enrollment and capacities of these two school districts is explained in this section of the EIR. After a thorough evaluation, the City of Anaheim has determined that the analysis presented in this section of the EIR is a

reasonable analysis that is substantiated by realistic assumptions and methodology. Cumulative impacts related to schools are also addressed in this section of the EIR.

Environmental Conditions

The project area is located within the jurisdictions of the AUHSD and the ACSD.

The AUHSD provides grades 7-12 and adult education for much of the cities of Anaheim, Buena Park, and Cypress, portions of the cities of La Palma, Stanton, Garden Grove, Fullerton, Los Alamitos, and Orange, as well as various areas of unincorporated Orange County. AUHSD operates eight junior high schools, eight high schools, three continuation high schools, and a special education school. The cities of Anaheim, Buena Park, and Cypress are approximate AUHSD boundaries.

Kindergarten through sixth grade students in the vicinity of the project area are served by the Anaheim City School District. The ACSD encompasses an area within, but not conterminous with, the City of Anaheim. ACSD has 21 kindergarten through sixth grade elementary schools. The City of Anaheim's boundaries approximate the boundary of the ACSD for the purposes of analysis of impacts because the district encompasses all of the City of Anaheim and only small portions of the cities of Orange and Garden Grove.

Anaheim Union High School District

Current Enrollment

According to the California Basic Education Data System (CBEDS) information provided by the district for the preparation of this EIR, the total enrollment in October 1997 (1997-1998 school year) in the seventh through twelfth grades in AUHSD was 24,744 students (Best, Best, and Krieger, September 1998). This is an approximately 3.2 percent increase from the enrollment in the 1996-1997 school year when enrollment was 23,973 students. Of the 24,744 currently enrolled students, 9,342 are junior high students in grades 7-8 (a 3.2 percent increase from the 1996-1997 school year enrollment of 9,052) and 15,402 are senior high students in grades 9-12 (a 3.2 percent increase from the 1996-1997 school year enrollment of 14,921). AUHSD continuation schools, special education programs, alternative education, and independent study programs account for additional students. The project is located within the Katella High School and South Junior High School attendance areas. For the purpose of this EIR analysis, the district provided the 1997-1998 enrollment and the estimated 1998-1999 enrollment projections for the AUHSD schools that serve the project area (Table 5.8-3). AUHSD has an "open enrollment" policy allowing students to choose his or her school of attendance. For that reason, the schools are addressed as a whole for the district.

TABLE 5.8-3
ESTIMATED ENROLLMENT IN GRADES 7-12 SCHOOLS
IN THE PROJECT VICINITY

School Complex	1997-1998	Projected Enrollment	
		1998-1999	1999-2000
Senior High	15,402	15,114	15,343
Junior High	9,342	9,149	9,274
Total	24,744	24,263	24,617
Source: Best, Best, and Krieger, September 1998.			

Student Generation Rates

According to the Anaheim Union High School District Fee Justification Study, prepared by Public Economics, Inc. (March 1996), the AUHSD student generation rate is 0.239 students per household in grades 7 through 12.

Future AUHSD Enrollment

Based on the AUHSD projected enrollment over the next 2 years, enrollment is projected to differ less than 10 percent, remaining relatively stable over that time period.

AUHSD Classroom Seating Capacity

AUHSD seating capacity is an estimate of the amount of classroom space available to house students based on a loading factor of 30 junior high school students per classroom and 28 senior high school students per classroom.

All AUHSD schools currently operate on a single-track, two-semester, or "traditional" school year schedule. Assuming a single-track, two-semester capacity, there are 14,239 senior high school seats (grades 9-12) and 8,524 junior high school seats (grades 7-8) in the AUHSD as a whole, not including the continuation high schools, special education schools, or administrative rooms within individual schools (Best, Best, and Krieger, September 1998).

Relationship of AUHSD Enrollment and Capacity

For the junior high and senior high school campuses closest to the project site, the 1997-1998 school year enrollment-capacity situation is illustrated in Table 5.8-4, Enrollment vs. Capacity Anaheim Union High School District. Overall, these schools are currently operating at about 10 percent above capacity. A comparison between projected junior high and senior high enrollment and the above capacity estimate of single-track seating capacity is shown in Table 5.8-5, Future Enrollment vs. Capacity Anaheim Union High School District.

Projections of junior high school enrollment indicated that by 2002-2003 enrollment will exceed capacity by 2,189 seats and at the senior high school level, there will be a deficit of 2,215 seats as shown in Table 5.8-5. However, this does not take into account future design improvements to AUHSD schools.

**TABLE 5.8-4
ENROLLMENT VS. CAPACITY
ANAHEIM UNION HIGH SCHOOL DISTRICT**

School	Enrollment (1997-1998 school year)	Capacity	Difference
Senior High			
Anaheim	2,334	2,146	-188
Cypress	2,017	1,940	-77
Katella	2,090	1,687	-403
Kennedy	1,991	1,896	-95
Loara	2,063	1,969	-94
Magnolia	1,608	1,562	-46
Savanna	1,755	1,538	-217
Western	1,544	1,501	-43
Subtotal	15,402	14,239	-1,163
Junior High			
Ball	1,205	1,120	-85
Brookhurst	1,166	1,049	-117
Dale	1,126	1,113	-13
Lexington	1,096	1,066	-30
Orangeview	957	944	-13
South	1,439	985	-454
Sycamore	1,275	1,154	-121
Walker	1,078	1,093	-15
Subtotal	9,342	8,524	-818
Total	24,744	22,763	2,011
Source: Best, Best and Krieger and Michael Brandman Associates, September 1998.			

**TABLE 5.8-5
FUTURE ENROLLMENT VS. CAPACITY
ANAHEIM UNION HIGH SCHOOL DISTRICT**

	1997-1998	2002-2003
Capacity^a		
Junior High	8,524	8,524
Senior High	14,239	14,239
Total	22,763	22,763
Enrollment		
Junior High	9,342	10,713
Senior High	15,402	16,454
Total	24,744	27,167
Surplus/Deficit		
Junior High	-818	-2,189
Senior High	-1,163	-2,215
Total	-1,981	-4,404
^a Capacity is based on current design capacity calculations and may change with future design improvements.		
Source: Best, Best, and Krieger and Michael Brandman Associates, September 1998.		

Anaheim City School District

Current Enrollment

For the purpose of this EIR analysis, the district provided enrollment figures, as of August 5, 1998, for schools located within the ACSD. During the 1997-98 school year, there were 20,128 students enrolled in ACSD schools. The enrollment situation at the District schools is summarized in Table 5.8-6.

Currently, all ACSD schools operate on a Multi-Track Year-Round Education program. Under this program, the school year is divided into four rotating tracks, with three tracks on and one track off (San Martin, pers. comm., 1998).

**TABLE 5.8-6
ENROLLMENT IN ANAHEIM CITY
SCHOOL DISTRICT SCHOOLS**

School	October 1997 Enrollment
Barton	917
Edison	1,023
Franklin	866
Gauer	729

TABLE 5.8-6 (continued)

School	October 1997 Enrollment
Guinn	758
Henry	1,008
Jefferson	682
Jefferson II	1,110
Juarez	906
Key	610
Lincoln	975
Loara	938
Madison	840
Mann	847
Marshall	1,170
Palm Lane	1,060
Price	1,048
Revere	1,106
Roosevelt	754
Ross	713
Stoddard	1,028
Sunkist	1,040
Total	20,128
Source: Anaheim City School District, September 1998	

Student Generation Rates

According to the District's Developer Fee Justification Study, the ACSD student generation rate is 0.46 students per household in grades K through 6.

Dividing ACSD's 1992-93 total enrollment by ACSD's estimate of 52,090 housing units located within the district in 1992-93 yields an overall student generation rate of 0.313 student per household, as shown in Table 5.8-7, Estimated Student Generation Rates for the Anaheim City School District (1992-93). Conversely, ACSD conducted a telephone survey of 322 homes within the district for the Anaheim Sports Center project in 1996. Based on this survey, it was determined that 275 homes had at least one employee resident. According to the district, on average, households with at least one employed resident generates 0.46 k-6 students.

Table 5.8-7 demonstrates that the projected generation rate is projected to decrease very slightly, but should remain fairly constant; therefore, in order to be conservative, 0.313 has been used as the current and projected student generation rate in the analysis.

In addition to the projection of students based on projected household in the district, ACSD has a formula for projecting students based on employees as follows in Table 5.8-8, Estimated Student Generation Rates Per Employee.

TABLE 5.8-7
ESTIMATED STUDENT GENERATION RATES FOR THE
ANAHEIM CITY SCHOOL DISTRICT
(1992-93 AND 2000-01 SCHOOL YEARS)

	Total (Grades K-6)	
	1992-93	2000-01
Enrollment	16,304	17,561
Occupied Dwelling Units	52,090 ^a	54,755 ^a
Student Generation Rate ^b	0.313	0.311
^a ACSD projections.		
^b Total K-6 enrollment divided by occupied dwelling units.		
Source: ACSD 1993 and 1998.		

TABLE 5.8-8
ESTIMATED STUDENT GENERATION RATES
PER EMPLOYEE

Job Type	Generation Rate (per employee)
Retail	0.24
Office	0.33
Hotel/Motel	0.97
Research and Development	0.33
Warehouse	0.27
Industrial	0.34
Source: ACSD 1995 and 1998.	

Future ACSD Enrollment

The ACSD has been growing by approximately 800 students per year over the last several years. Based on this estimate, ACSD's student enrollment is projected to increase by 4,000 students over the next five years.

ACSD Classroom Seating Capacity

ACSD seating capacity, or the amount of classroom space available to house students, is determined by first classifying each teacher "work station" in each ACSD school by type (e.g., kindergarten or general classroom) and by grade level. Each classroom type is then multiplied by state pupil "loading" standards, expressed in terms of Average Daily Attendance (ADA) per teaching station. ADA is equal to 97 percent of actual enrollment to account for the fact that some students are absent from school each day of the school year. Since this is a formula used by the state to determine eligibility for capacity expansion (e.g., new schools), the ADA standards are fixed on a statewide basis and do not necessarily conform with maximum class sizes as reflected in local school district policies and classroom teacher agreements. Each individual school's seating capacity is the sum of these calculations for each respective teacher work station.

The 30-student loading standard used for general classrooms is an average for the State Department of Education pupil loading of 29 students per class for grades 1-3 and 33 students per class for grades 4-6. These classroom loading standards are consistent with the maximum standards permitted by the State Department of Education. Applying the appropriate state "loading" factors, as described above, to the number of classrooms reported as of September 1998 by ACSD for each school in the district provides an estimate of 17,880 seating capacity in the ACSD.

However, based on ACSD's Current Monthly Enrollment Summary as of September 1998, it was estimated that the district has a seating capacity of 15,456. This capacity, although quite lower than the figure obtained using state "loading" factors, does assume an increase capacity of 25 percent from all schools operating on a multi-track, year-round basis within the district.

Relationship of ACSD Enrollment and Capacity

With a seating capacity of 15,456 in the ACSD, there should be additional classroom space warranted through 2000-2001, based on the total number of housing unit projects and the student generation rate of 0.46.

More specifically, based on the most reflective student generation rates (0.46 per household) and existing capacity, projections of K through 6 grade enrollment indicated that by the 2000-2001 school year enrollment will exceed capacity by 2,105 seats. However, this does not take into account future design improvements to ACSD schools.

ACSD Inter-district Transfers

As previously discussed, a school district may consider applications for inter-district transfers from parents who reside outside the district if the parent or guardian is employed within the boundaries of the district. The inter-district transfer program in the ACSD applies to students in all grades from kindergarten through the 8th grade.

According to an ACSD representative, the district turns down four incoming transfer applications for every one it accepts, primarily due to space limitations. There has been a declining number of incoming ACSD inter-district transfers and a fairly stable number of out-going transfers. Each year the number of out-going transfers has exceeded in-coming transfers. These relationships are shown in Table 5.8-9.

TABLE 5.8-9
INTER-DISTRICT TRANSFERS TO AND FROM
THE ANAHEIM CITY SCHOOL DISTRICT (1987-88 TO 1990-91)

Year	Transfers In	Transfers Out	Net Change
1987-88	158	297	-139
1988-89	108	238	-130
1989-90	112	286	-174
1990-91	62	243	-181

Source: Disneyland Resort EIR, Appendix J, 1993 (Update not available).

Environmental Impacts

Thresholds of Significance

A project is considered to have a significant impact on educational services and facilities if the employment generated by the project indirectly leads to student enrollment increases sufficient to generate construction of new schools; or if project-related school development fees are not adequate to compensate for direct or indirect induced student generation beyond the projected capacity of the school district.

Impacts

The project will likely indirectly generate some additional students to district schools. Indirect student generation, school facility demand and school financing issues do not themselves constitute physical effects on the environment under CEQA. Further estimating the number of students that may be

indirectly generated by the project is both complicated and subject to many factors. Indeed, an attempt at quantification borders on speculation, but an effort has been made as part of the analysis provided in this EIR.

Anaheim Union High School District

Direct Impacts

Since the implementation of the project does not involve the construction of new dwelling units, it will not have direct impacts on the AUHSD in terms of directly generating new students. Concerning inter-district transfers in the seventh and eighth grades, there is no evidence that there is a significant demand among the current employees in the project area and there is no reason to believe that there will be greater demand among the employees generated by future development projects within the project site. In any event, a decision whether to permit such inter-district transfers is entirely within the control of the AUHSD. Should capacity problems emerge in the future, it is anticipated that permission for any project-related inter-district transfers would be denied due to lack of school capacity. No significant direct impacts are anticipated to occur.

Indirect Impacts

Applying the AUHSD student generation rates previously described to the estimated number of housing units projected by the housing demand analysis indicates that the project could indirectly generate 205 AUHSD students ($0.239 \text{ per household} \times 859 \text{ project-related dwelling units} = 205 \text{ AUHSD students}$).

Anaheim City School District

Direct Impacts

Since implementation of the project does not involve the construction of new dwelling units, no direct generation of new students will take place. Parents of K-6 students who reside outside the ACSD but want to enroll their children in district schools may have a direct impact. However, this is a matter of policy for the district and as such, it can decide whether excess student capacity should be reserved for students residing within the district. Further, there is no evidence of a significant demand by existing employees in the project site for inter-district transfers into the ACSD, and there is no evidence to demonstrate a change in this situation for the project-generated employees. Permission for inter-district transfers for children of specific development project employees could be denied by the ACSD because of lack of space, preventing a project impact. Implementation of the proposed project would not result in a significant direct impact to ACSD.

Indirect Impacts

A reasonable estimate of indirect school enrollment increases can be determined from the project's estimated indirect demand for housing in the City of Anaheim. Additional information on the project's indirect demand for housing is provided in Section 5.7, Employment, Population, and Housing. It shows an estimated total need for 859 units for all household income categories in the area of the Anaheim City School District by 2010.

Applying the ACSD student generation rates discussed previously to the number of housing units implied by the project housing demand in Anaheim indicates that implementation of the project could generate 395 ACSD students by 2010 (0.46 per household x 859 project-related dwelling units = 395 ACSD students).

Statutory Developer Fee for ACSD and AUHSD

Under state law (California Government Code Section 53080 et seq.), a fee will be collected from the developer of future developments within the MLUP. A specific project's fee is based on applicable floor area for commercial structures multiplied by \$0.31 per square foot for commercial/industrial development, as adjusted according to state law. The impact fees will be evenly divided by the ACSD and AUHSD. With approximately 2.8 million square feet of new commercial, retail, and office development at the MLUP site, the MLUP would generate approximately \$1,027,623 in school fees (Table 5.8-10).

TABLE 5.8-10
ESTIMATED DEVELOPMENT FEES FOR ACSD AND AUHSD

Use	Square Footage	Fees Generated
Industrial	491,303	0
Retail	452,026	\$ 140,128
Office	1,871,285	\$ 580,098
Hotel	991,603	\$ 307,397
Total Fees Generated		\$ 1,027,623
Source: ACSD, August 1998; Best, Best, and Krieger, August 1998; and Michael Brandman Associates, September 1998.		

To the extent that implementation of the MLUP generates households occupying new housing units in the ACSD and AUHSD, the developers of those units will also pay a statutory fee to the districts to mitigate school impacts. Thus, the districts will collect fees both from the future developments within

the project area and from builders of new homes into which project employee households may move. The housing fee paid to the ACSD and AUHSD is based on an average unit size of 1,364 square feet (per the ACSD Fee Program Justification Report) and the current maximum statutory fee of \$1.93 per square foot. Assuming the new employees generate the need for new development within the AUHSD and ACSD boundaries, the residences are subject to a school fee, the 859 units would generate a total of approximately \$2.3 million.

Approximately \$1,027,623 in school fees would be generated by implementation of the MLUP. The actual fees paid will be commensurate with the amount of commercial and residential development that occurs. The estimated cost of impacts to schools based on indirect impacts of \$9,874 per new student at AUHSD and \$10,478 at ACSD is based on the Hamilton, Rabinovitz & Alschuler, Inc. school impact assessment of The Disneyland Resort EIR, Volume 5, Appendix J. With the \$1,027,623 in school fees from development of the MLUP and approximately \$2.3 million in fees from projected new residential development, a total of approximately \$3.3 million in school impacts fees would be generated by project implementation. The 205 potential AUHSD students and 395 ACSD students would generate a cost impact of up to \$4.8 million (\$2.0 million and \$2.8 million, respectively). With developer fees from the project and new residential development totaling up to \$2.3 million, a shortfall of approximately \$2.5 million in fees for new student incurred costs would result from project implementation resulting in a significant impact to schools due to the shortfall of funding.

Cumulative Impacts

The study area for cumulative assessment of school impacts is comprised of the district boundaries of the ACSD and the AUHSD.

Infill housing and higher densities in existing housing are expected to occur within the study area, including development of related projects. This would generate additional students at AUHSD and ACSD. The related projects do not include housing units. The nonresidential related projects would indirectly generate new students. However, because of the absence of detailed data on the characteristics of the labor force associated with the nonresidential related projects, it is not possible to predict the possible secondary impacts of the related projects with any degree of precision. There are no residential developments in the related projects list (Section 4). However, each new project requiring discretionary approval will be subject to individual environmental review by the City, including, where applicable, impacts on school facilities. The development fee for the Districts (\$1.93 per square foot on residential development and \$0.31 per square foot on commercial industrial development currently) will be collected for each new development, where appropriate (Best, Best, and Krieger, August 1998).

It is unknown how many residential units will be constructed within the ACSD and AUHSD by the year 2010. It is assumed that development of the MLUP may induce residential growth within the City, but the amount is unknown. For this reason, it must be concluded that impacts to schools will be significant. Imposition of developer fees, in accordance with state law, will mitigate potential impacts to level considered less than significant by state law.

Mitigation Measures

Mitigation Measure 8.5-1. Prior to issuance of each building permit, the property owner/developer shall provide proof to the Building Division of the Planning Department that school impact fees have been paid consistent with State statutes.

Significant Unavoidable Adverse Impacts

The proposed project will not have any direct impacts on the AUHSD or ACSD. The recommended mitigation measure imposes the maximum developer fee imposed by the state. Project development may indirectly result in the development of housing units that will create significant impacts to the School Districts.

5.8.6 WATER

This section addresses the water distribution system serving the project site. Section 5.6, Hydrology and Water Quality, discuss the potential impacts of the project on available water supply. An analysis of the effects of the project and related projects on water service was prepared as part of the *Anaheim Stadium Area Master Land Use Plan Draft EIR – Public Services and Utilities Technical Report* prepared by IWA Engineers, September 1998. The report has been summarized in this section and included in its entirety as Appendix B.

Environmental Conditions

Regional Setting

Water service is provided to the project site by the City of Anaheim Public Utilities Department, Water Division. The majority of the City's water (approximately 70 percent) is pumped from the local groundwater basin. The water for the local groundwater basin is supplied through storm water infiltration and recharge basins. As back up for the wells, the City purchases water from the Metropolitan Water District (MWD).

MWD is a wholesale water agency responsible for providing supplemental water (water from a source other than local groundwater and surface water) to water agencies within its service area. MWD supplies imported water to Southern California from northern California and the Colorado River. MWD contracts for this water from the State Water Project (SWP). As a wholesale agency, MWD finances, constructs, and operates the pipelines and other facilities to transport the State water from its source to the wholesaler's area of service. Water purveyors, such as the City of Anaheim Public Utilities Department, Water Division, contract with MWD for water. Purveyors transport the water from the wholesale agency's storage facility or from turnouts, connection points, on the wholesaler's distribution pipeline and provide water service to their retail clients.

Local Setting

Seventy percent of the domestic water used in Orange County is derived from the groundwater basin managed by the Orange County Water District (OCWD). OCWD prepared a Groundwater Management Plan (GWMP) in 1994 which defines goals to increase basin water supplies, protects and enhances water quality, and improves basin management for purposes of increasing reliance on local sources rather than on less dependable imported water.

OCWD and the County Sanitation District of Orange County (CSDOC) are jointly evaluating the Orange County Regional Water Reclamation Project (OCR Project) to develop a reclaimed water supply for northern Orange County. This project will produce reclaimed water while fulfilling its primary directive of recharging groundwater at OCWD's existing recharge facilities in the City of Anaheim.

Well No. 33, the closest source of groundwater serving the project site, has operated for 30 years at the intersection of Stadium Way and Stadium Center Drive. The well produces an average of 1,080 gallons per minute and is 469 feet deep. A connection to the MWD system near the intersection of Cerritos Avenue and Lewis Street provides back-up service for the well.

Well No. 33, the existing MWD connections, and the distribution lines are capable of supplying the existing maximum daily demands and peak hour demands to the project site. However, new wells will be necessary in the future in order to compensate for diminishing production from older wells serving the area.

The project site is serviced by water mains below the City's roadway system (Exhibit 5.8-3). The water mains vary in size from 6-inch to 24-inch. These service lines are supplied with water by Well No. 33 and Well No. 19. Well No. 33 is located in the Anaheim Stadium parking lot whereas Well No. 19 is located off of Lewis Street near Ball Road. The water distribution system in the area has recently been upgraded to a single pressure zone of 97 pounds per square inch (psi), 335 foot static hydraulic grade line (HGL).

In 1992, the City of Anaheim adopted Ordinance No. 5349, the Landscape Water Efficiency Ordinance, to reduce and conserve landscape-related water consumption. The purpose of this ordinance is to “promote efficient water use through landscape design appropriate to Anaheim’s climate zone.” The ordinance applies to all new and rehabilitated public, industrial, commercial, and institutional landscaping and developer-installed landscaped common areas in single-family and multi-family residential land uses. As such, the documentation and monitoring requirements of the landscape Water Efficiency Ordinance would apply to landscaping proposed within the project site.

Environmental Impacts

Thresholds of Significance

A project is considered to have a significant impact on water services if existing or future planned facilities are not adequate to serve proposed land uses.

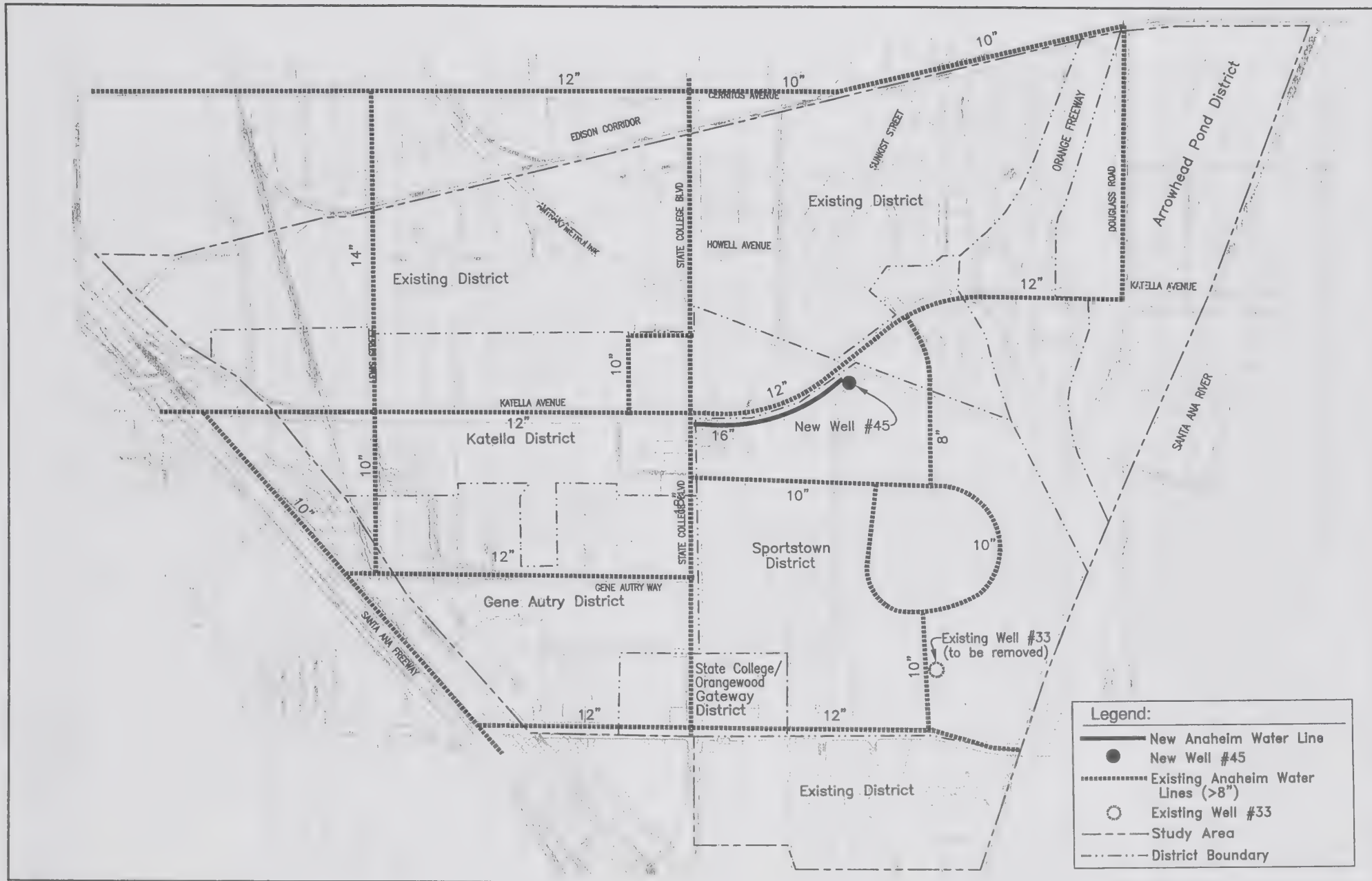
Impacts

Project Consumption: Average Daily/Peak Demand

Project implementation would result in an increase in water consumption from domestic and fire demands. As identified in Table 5.8-11 the projected increase per day in water demand for the project site will be 0.297 million gallons per day (mgd). The existing systems servicing the site are capable of supplying the projected maximum daily demands to the project site.

**TABLE 5.8-11
PROJECTED DAILY WATER DEMAND**

Component	Area	Consumption Rate (gpd/sf)	Water Demand (mgd)
<u>Proposed Land Use</u>			
1. Industrial	-491,303 sf	0.083	-0.041
2. Office	1,871,285 sf	0.055	0.103
3. Retail	452,026 sf	0.055	0.025
4. Hotels	991,603 sf	0.055	0.210
Total Project Water Demand			0.297
Consumption rate is derived from the City of Anaheim Stadium Area Plan Water Duty Factors for gallons per square foot per day. 270 days per year.			
Hotel rate is based on 2AF/AC/YR plus 150 gal/room/day.			
Source: IWA Engineers, September 1998.			



SOURCE: IWA Engineers.



Michael Brandman Associates

19870002 • 9/98

Exhibit **5.8-3** Domestic Water System

ANAHEIM STADIUM AREA MASTER LAND USE PLAN EIR

A new well (No. 45) will be necessary in order to compensate for diminishing production from older wells serving this zone. Well No. 45 will serve as a major source of water supply for the proposed project. This well is projected to produce 3,000 gallons per minute and will be approximately 1,400 feet deep. Improvements to the conveyance infrastructure in the area of the proposed project will also be necessary to serve the proposed project. Regardless, no significant impacts to water service are anticipated with the development of the proposed facility improvements.

As required for other major projects in the City, the project will include dual piping onsite to utilize reclaimed water when it is available from the County Sanitation District of Orange County (CSDOC). Subsequently, a particular piping system in the surrounding streets will be upgraded from this development. Additionally, development of the proposed project will require project specific improvements and inclusion of previously contemplated City improvements. These improvements are identified in the City of Anaheim Five-Year Water System Plan and include the following:

- Oranewood Avenue 16-inch Main – construct supply mains in Oranewood Avenue from Manchester Avenue to State College Boulevard. The improvement consists of 16-inch main within 30-inch casing across the right-of-way of the I-5 and water main outside the freeway right-of-way.
- Katella Avenue 16-inch Main – construct supply mains in Katella Avenue from Manchester Avenue to Lewis Street. The improvement consists of 16-inch water main outside the freeway right-of-way.

Fire Flow

The adequacy of fire flow protection for a given area is based on required fire flow, response distance from existing fire stations, and the City of Anaheim Fire Department's judgment of needs in an area. Required fire flow is closely related to land use. The quantity of water necessary for fire protection varies with the type of development, life hazard, occupancy, and the degree of fire hazard. According to the Anaheim Fire Department, improvements to the water system in this area will not be required as the system presently can provide 6,000 gpm for the 2-hour fire incident at 20 psi. According to the City of Anaheim Fire Department, 6,000 gpm is required for fire flow in non-sprinkler buildings. For buildings with sprinkler systems, the requirement is 4,000 gpm. Proposed buildings will be designed with sprinklers for fire protection. Fire flows have not been considered in the water demand calculations. Because fire flow demands are intermittent and variable, it is standard industry practice not to consider fire flow in demand calculations. In evaluating the water system, the City will combine the fire flows to the maximum daily demand flows to determine the pipe sizes.

Cumulative Impacts

During periods of drought, regional water demand may be greater than natural replenishment of water reserves, resulting in a drawdown of stored water captured for water supply use. During such periods, increased water demands from the project will contribute to such drawdown as will any and all other future increases in regional water demand. While this potential impact may be cumulative during drought periods, replenishment of water supplies when conditions return to normal or during wet periods will eliminate any such impacts. This impact will be further mitigated by the institution of the OCR Project that will supply reclaimed water to the Anaheim area, thus, reducing the need for potable water supplies.

Mitigation Measures

Mitigation Measure 8.6-1. Prior to the issuance of the final building permit, new Well No. 45 will be installed to replace the existing Well No. 33. This well will serve as a major source of supply for the proposed project. This new well will be installed near the intersection of Katella Avenue and the proposed project access from Katella Avenue. The well is expected to produce in the vicinity of 3,000 gallons per minute and will be approximately 1400 feet deep. In addition, the existing Well No. 33 will be removed.

Mitigation Measure 8.6-2. Prior to the issuance of the final building permit, a new 16-inch pipeline will be constructed in Katella Avenue from Well No. 45 to the existing 18-inch line at the intersection of Katella Avenue and State College Boulevard. This new pipeline will complete a loop with the sites proposed and surrounding system.

Mitigation Measure 8.6-3. Prior to the issuance of a building permit, a submitted landscape plan shall demonstrate compliance with the City of Anaheim adopted the Landscape Water Efficiency Guidelines. This ordinance is in compliance with the State of California Water Conservation in Landscaping Act (AB 325). Among the measures to be implemented with the project are the following:

- Use of water-conserving landscape plant materials wherever feasible;
- Use of vacuums and other equipment to reduce the use of water for wash down of exterior areas;
- Low-flow fittings, fixtures and equipment including low flush toilets and urinals;
- Use of self-closing valves for drinking fountains;

- Use of efficient irrigation systems such as drip irrigation and automatic systems which use moisture sensors;
- Infrared sensors on sinks, toilets and urinals;
- Low-flow shower heads in hotels;
- Infrared sensors on drinking fountains;
- Use of irrigation systems primarily at night, when evaporation rates are lowest;
- Water-efficient ice machines, dishwashers, clothes washers, and other water using appliances;
- Cooling tower recirculating system;
- Use of low flow sprinkler heads in irrigation system;
- Use of waterway re-circulation systems;
- Provide information to the public in conspicuous places regarding water conservation; and
- Use of reclaimed water for irrigation and washdown when it becomes available.

In connection with submittal of landscape and building plans, the applicant shall identify which of these measures have been incorporated into the plans.

Mitigation Measure 8.6-4. Prior to issuance of the first building permit, the applicant will provide engineering studies, including network analysis, to size the water mains for ultimate development within the project. This includes detailed water usage analysis and building plans for Public Utilities Water Engineering review and approval in determining project water requirements and appropriate water assessment fees.

Significant Unavoidable Adverse Impacts

Implementation of the mitigation measures listed above will reduce the impacts on the water supply system to a level considered less than significant.

5.8.7 WASTEWATER

Environmental Conditions

Regional Setting

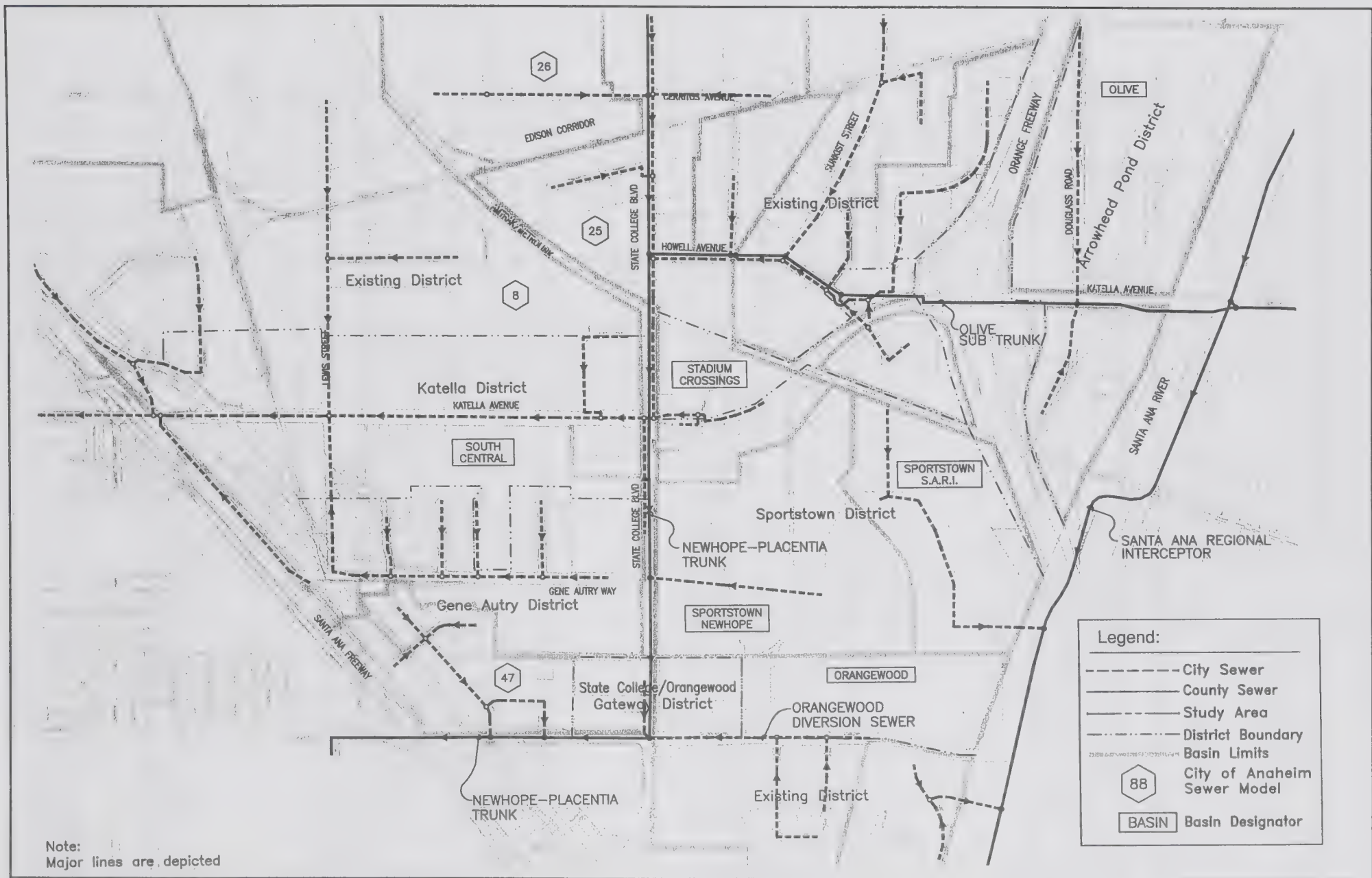
The City of Anaheim's local sanitary sewer system serves the project vicinity, and is a tributary to the County Sanitation District of Orange County (CSDOC) District 2. The entire CSDOC system encompasses 439 square miles. CSDOC services approximately 86,000 acres and includes the Cities of Placentia, Villa Park, and Yorba Linda in their entirety and portions of the cities of Anaheim, Brea, Fullerton, Fountain Valley, Garden Grove, Orange and Santa Ana. In addition, numerous unincorporated islands of the County of Orange are included.

Wastewater from the City sewer system is conveyed to the County trunk and interceptor sewers to regional treatment and disposal facilities. The CSDOC sanitary sewers serving the project area are the Newhope-Placentia Trunk, the Olive Sub-trunk, the Orangewood Diversion Sewer and the Santa Ana River Interceptor (SARI) line. Flows go to the District's Treatment Plant No. 1 in Fountain Valley. Plant Number 1 has a total capacity of 60 million gallons per day (mgd). The Fountain Valley plant, along with Treatment Plant Number 2 in Huntington Beach, treats wastewater from 24 Orange County cities and unincorporated County areas. Together the treatment plants process more than 270 mgd of wastewater. Approximately 80 percent of the total effluent is generated by residential uses. The balance comes from industrial and commercial sources. Treated effluent is discharged into the Pacific Ocean. CSDOC also plans to expand Plant Number 1 in Fountain Valley to increase their processing capacity to 120 mgd of wastewater.

CSDOC currently reclaims up to 15 mgd of secondary treatment water from the Fountain Valley Plant, which is purified at the Orange County Water District (OCWD) Factory 21. The purified water is injected into the groundwater table to block seawater intrusion and supply reclaimed water for industrial and irrigation uses. CSDOC has proposed to reclaim an additional 15 mgd for industrial use and landscape irrigation. In the future CSDOC plans to reclaim up to 100 mgd.

Local Setting

The project site is served by two agencies' sewer collection systems. The City of Anaheim has a collection system of gravity sewer lines that service the area, which are tributary to the County's system. CSDOC has three major gravity trunk sewers and a gravity diversion sewer in the project area. City sewers within the South Central Basin (generally west of State College Boulevard) are tributary to the South Anaheim Interceptor or the Euclid Trunk (via the Katella Avenue Relief sewer) approximately 1.8 miles west of the project area. Exhibit 5.8-4 shows the locations of the lines within the project area.



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Exhibit 5.8-4 Existing Sewer System

ANAHEIM STADIUM AREA MASTER LAND USE PLAN EIR

City Sewer Collection System

Stadium Crossing System

Within the Stadium Crossings System, a 15-inch gravity sewer line lies within the northern portion of the development area within State College Boulevard from the Edison Corridor to Katella Avenue. An 8-inch gravity sewer line also exists north of the centerline in Katella Avenue that enters the same manhole as the above 15-inch line prior to entering the County Sanitation trunk sewer line in State College Boulevard. This 8-inch line runs easterly for about 440 feet along Katella Avenue then runs south to the Stadium property and will serve the new Tinseltown Project.

Tinseltown Sewer System

The Tinseltown Sewer System consists of an 8-inch sewer line that starts at the State College Boulevard and Katella Avenue intersection, and continues upstream along Katella Avenue north of the centerline for approximately 440 feet, then south for 50 feet, then easterly for 480 feet to its end. Along the last 480 feet, a new 8-inch lateral runs south to serve the new Tinseltown Project. This sewer system resides within the stadium property with a westerly limit at the eastern property line of several small parcels at the southeast corner of State College Boulevard, the northerly limit is Katella Avenue, the easterly limit is the west side of the Stadium, and the southerly limit is the north side of the Stadium.

Sportstown Sewer System

The Sportstown Sewer System is within the stadium property and is tributary to the County's old Newhope-Placentia trunk line in State College Boulevard by a 15-inch line extending from the west side of the Stadium westerly to the County's trunk in State College Boulevard. Katella Avenue, Tinseltown, and several small commercial parcels (southwest corner of State College/Katella) borders the Sportstown Sewer System on the north, State College Boulevard to the west, the Stadium on the east, and the main entrance drive to the Stadium on the south. Portions of the Existing, Katella, and Sportstown Districts are tributary to this system. This existing 15-inch City sewer, connecting to the CSDOC system at State College Boulevard, extends under the County's Southeast Anaheim Channel to connect into the County's old Newhope-Placentia trunk sewer.

South Central Area Basin

A City sewer line in Katella Avenue begins approximately at State College Boulevard, and continues westerly towards the west end of the Stadium development area. This line ranges in size from 18

inches to 21 inches in diameter within the project area. This sewer flows towards the west along Katella Avenue beyond the west end of the project area. The area this sewer services was previously studied in the South Central Area Sewer Deficiency Study, Second Revision, January 1993 and is herein referred to as the South Central Area Basin. The westerly limits of this basin extend outside the project boundaries near West and Ninth Streets. The northerly limit is mostly outside the project area (just south of Ball Road), except at the AT&SF/Metrolink right-of-way. The easterly limit is located at State College Boulevard and the southerly limit is located approximately at Gene Autry Way. Portions of the Existing District, Katella District, and Gene Autry District are tributary to this basin.

Orangewood Avenue Sewer System

Since the County's Newhope-Placentia trunk sewer runs in Orangewood Avenue from State College Boulevard to Lewis Street, all City sewers consisting of short legs/runs at Santa Cruz Street, Anaheim Boulevard, and Cypress Street tie directly into the County Orangewood Avenue trunk.

County Sewer Collection System

The major trunk lines of the County Sewer Collection System, within the study area, are the Newhope-Placentia Trunk, Olive Sub-trunk, Orangewood Diversion and the Santa Ana Regional Interceptor (SARI). The following is a more detailed description of these sewer facilities.

Orangewood Diversion Sewer

The old County Newhope-Placentia Trunk is located at the north end of the project area and flows southerly within State College Boulevard from the Edison Corridor to Orangewood Avenue then easterly along Orangewood Avenue to the County SARI. The size of the line within this reach ranges from 36 inches to 42 inches in diameter. Flows north of the State College Boulevard/Orangewood Avenue intersection (in the old alignment of the Newhope-Placentia line) have been diverted easterly by the CSDOC Orangewood Diversion Sewer. The CSDOC Orangewood Diversion Sewer was built to alleviate a deficiency in the Newhope-Placentia Trunk identified by CSDOC in their 1991 Master Plan. The 48-inch Orangewood Diversion Sewer flows easterly in Orangewood Avenue between State College Boulevard and the SARI crossing at the Santa Ana River. The old Newhope-Placentia Trunk runs upstream in State College Boulevard to serve the City of Fullerton at Orangethorpe Avenue.

Newhope-Placentia/Orangewood Basin

At Orangewood Avenue and State College Boulevard, the Newhope-Placentia Trunk turns to the west past the western boundary of the Stadium to Lewis Street, then south to Lewis Street through the City of Orange to the County SARI. The properties along Orangewood Avenue are tributary to the Newhope-Placentia Trunk via 8-inch to 12-inch City sewers in and along the street. The northerly limit of this basin is generally Gene Autry Way (west of State College Boulevard) and the backside of the businesses along Orangewood Avenue. The easterly limit is the Santa Ana River, the southerly the City boundary and the westerly limit is the I-5.

Olive Basin

The Olive Subtrunk is located along Katella Avenue at the northeastern end of the project area and continues in a westerly direction through Howell Avenue to connect to the Newhope-Placentia Trunk at State College Boulevard. The size of the line within that reach ranges from 24 inches to 30 inches in diameter.

Properties within the Olive Basin are tributary to the Olive Sub-trunk via City sewers in Sunkist Street, Sinclair Street, and Douglass Road. The westerly limit of the basin is located along the western side of the properties fronting Sunkist Street and Page Court, the Southeast Anaheim Channel right-of-way. The northerly limit includes the golf center north of Ball Road beyond the project area. The easterly limit is the Santa Ana River and the southerly limit is the AT&SF/Metrolink right-of-way. Portions of the Arrowhead Pond, Existing, and Katella Districts are tributary to this basin.

Environmental Impacts

Thresholds of Significance

A project is considered to have a significant impact on wastewater service if:

- Wastewater flows generated by the project cannot be accommodated by the local wastewater treatment system.
- Wastewater distribution lines are not capable of conveying the sewage generated by the project to the wastewater treatment plant.

Impacts

The City is undergoing a process of preparing Sewer Deficiency Studies for the entire City. These studies are intended to identify existing and expected deficiencies in the City's sewer system and develop costs for eliminating those deficiencies. Currently, there is no comprehensive study covering the project area (except the South Central Basin). A report, following the City's format, was prepared as part of the *Public Services and Utilities Technical Report* (Appendix B).

A comparative analysis revealed that there would be a minimal change to the County's Master Plan for the project area and that CSDOC facilities have been adequately sized to accept the project flows (IWA Engineers 1998).

Relative to the City's sewers, a moderate increase in flow is expected. The analysis did not include a specific review of the sewers within the individual development areas with respect to where actual land use changes will occur within the Districts. The sewer deficiency study, included in the *Public Services and Utilities Technical Report* (Appendix B), evaluated deficiencies in the sewer system for existing land uses and proposed land uses pro-rated throughout the District and Basin.

Project Generation/Peak Flows

Project implementation would generate an increase in onsite peak sewage flows of 0.569 million gallons per day (mgd), as indicated in Table 5.8-12, Projected Daily Wastewater Generation.

**TABLE 5.8-12
PROJECTED DAILY WASTEWATER GENERATION**

Component	Area	Consumption Rate (gpd/sf)	Wastewater Generation (mgd)
Proposed Land Use			
Industrial	-491,303 sf	-0.08	-0.039
Office	1,871,285 sf	0.20	0.374
Retail	452,026 sf	0.08	0.036
Hotels	991,603 sf	0.20	0.198
Total Project Wastewater Generation			0.569
gpd = gallons per day mgd = million gallons per day sf = square feet			
Source: IWA Engineers, September 1998.			

Development of the MLUP will require project-specific improvements and inclusion of previously contemplated City improvements in order to adequately serve the proposed project. The following are previously contemplated improvements included in the South Central Area Sewer Deficiency Study:

Anaheim Boulevard Sewer – Construct a replacement sewer in Anaheim Boulevard from AT&SF/Metrolink right-of-way to Claudina Street. The improvement consists of a 10 to 12-inch sewer along the I-5 right-of-way.

Lewis Street Sewer – Construct a parallel 8-inch sewer in Lewis Street from 330-feet south of Katella Avenue to Katella Avenue.

Gene Autry Way Sewer – Construct an 8-inch replacement sewer in Gene Autry Way from Betmor Street to Lewis Street.

Lewis Street/Anaheim Boulevard Sewer – Construct a 10-inch replacement sewer in Anaheim Boulevard along the I-5 right-of-way. Connect the Gene Autry Way sewer to divert flow from an 8-inch sewer in Lewis Street.

The sewers contemplated with the previously approved Anaheim Sports Center EIR are considered as on-site improvements and are not included herein as part of this project.

Cumulative Impacts

The study area for wastewater services is made up of residential, commercial and industrial land uses, and consists of portions of Anaheim, Garden Grove and a section of unincorporated Orange County. The study area is served by the City of Anaheim local sanitary sewer system. The proposed project and the related projects are tributary to the City's main sewer lines located in Katella Avenue, Ball Road, Cerritos Avenue/Euclid Street, Cerritos Avenue/Walnut Street, Harbor Boulevard, West Street, Orangewood Avenue, and Chapman Avenue. The first revision of South Central Area Sewer Deficiency Study was recently prepared by the City for Central Anaheim, which includes a majority of the area where the related projects are located (The Disneyland Resort, Anaheim Resort, and Hotel Circle Specific Plan areas, etc.). The purpose of the study is to ensure adequate capacity for buildout of the project area.

The first revision of the Sewer Deficiency Study analyzed existing facilities for capacities or restrictions and, based on year 2010 buildout land use conditions and densities, identified necessary improvements to accommodate development within the South Central Area (Exhibit 5.8-5). The implementation of measures identified within this plan would ensure that adequate sewer capacity would be provided to the related projects. Implementation of the wastewater mitigation measures stated in this section will enable the sewer system to accommodate development on the project site and surrounding area. Mitigation measures would be provided by property owners/developers in the area on a fair share basis. No significant cumulative impact is anticipated.

Mitigation Measures

The following mitigation measures are recommended to reduce the impacts on wastewater services and facilities from the implementation of the proposed project.

Mitigation Measure 8.7-1. Prior to occupancy of an area located within the Arrowhead Pond District between the Southern Pacific Railroad right-of-way to the north, the Pond to the south, Pond Parking to the east, and Douglass Road to the west, a 12-inch replacement sewer in Douglass Road from Katella Avenue to this area will need to be constructed.

Mitigation Measure 8.7-2. The property owner/developer shall pay their fair share towards construction of a sewer line in Katella Avenue that will flow from a point between I-5 and State College Boulevard to intersect with the County's trunk line in State College Boulevard.

Significant Unavoidable Adverse Impacts

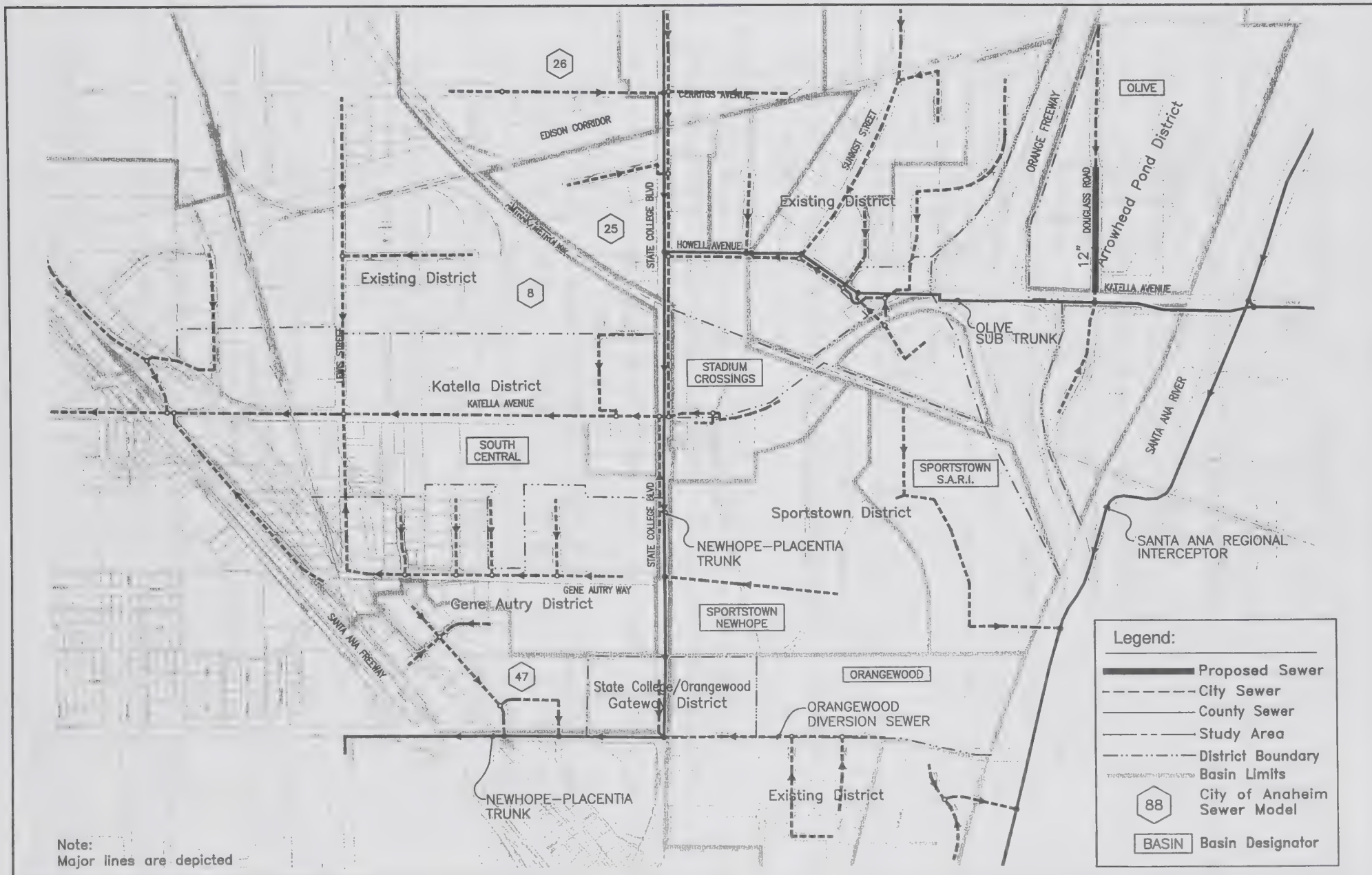
Following implementation of recommended improvements and mitigation measures, no significant unavoidable adverse impacts are anticipated.

5.8.8 DRAINAGE

Environmental Conditions

The project area consists of two drainage basins. The eastern drainage basin of the project area is within a portion of the City of Anaheim Master Plan for District Area 27 and drains directly into the OCFCD's Santa Ana River (E01). The Federal Emergency Management Agency (FEMA) has indicated on the Flood Insurance Rate Maps (FIRM), that the eastern drainage basin lies within two Flood Zones (1997). The northerly portion is within Flood Zone X and is subject to flooding during 500-year and 100-year floods with average depths of less than one foot; or a drainage area less than 1 square mile; or areas protected by levees from a 100-year flood. The remaining area is in Flood Zone A99, which will be classified as non-flooding (the Santa Ana River FIRM will be removed) after the drainage improvements to the Santa Ana River watershed are completed in 1999; as described as follows. Orange County is in the process of:

1. Improving the lower Santa Ana River from I-405 to its outlet at the Pacific Ocean;
2. Constructing the Seven Oaks Dam in Redlands; and
3. Raising Prado Dam by 28.4 feet to increase its capacity to detain additional runoff. These three improvement projects are included in the OCFCD's 5-Year Capital Improvement Plan.



SOURCE: IWA Engineers.



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Exhibit 5.8-5 Proposed Sewer System

ANAHEIM STADIUM AREA MASTER LAND USE PLAN EIR

The central/eastern portion of the project area drains into the OCFCD's Southeast Anaheim Channel (SAC, E12), which discharges into the Santa Ana River (E01) open channel. This County facility varies in pipe size from 42-inches at the upstream end to an 11-foot by 10-foot reinforced concrete box culvert (RCBC) where it enters the Santa Ana River Channel. The SAC begins at the Santa Ana River facility, proceeds northwesterly upstream approximately 1,760 feet. It continues northerly for approximately 200 feet to the southern Anaheim City Limit, then northerly 915 feet to the centerline of Orangewood Avenue. The channel then heads northerly 2,800 feet across the Stadium property to a point on the north side of Katella Avenue angling in a northeasterly direction to a point across the AT&SF Railroad tracks. On the far side of the tracks, it continues northerly to Cerritos Avenue, westerly along Cerritos Avenue to State College Boulevard, and northerly along State College Boulevard to Lincoln Avenue.

The County of Orange has estimated 100-year discharges for the SAC (E12) facility. These discharges were utilized in the hydraulic analysis for evaluation of the capacity of the E12 facility. The RCBC can handle only 80% the required discharge (Q100) at the upstream point of study (State College Boulevard and Cerritos Avenue).

The western portion of the project area drains to the OCFCD's Spinnaker Storm Drain (CO5P21) which discharges into the OCFCD's regional facility, East Garden Grove-Wintersburg Channel (EGGWC, CO5). The upstream point of the EGGWC begins just south of Chapman Avenue approximately 675 feet west of Lewis Street. This channel was built in the early 1960's as a RCBC and trapezoidal channel. The EGGWC has a capacity less than a 10-year storm event. In 1989, the trapezoidal portion of the EGGWC was replaced with a RCBC designed to convey the 100-year storm frequency south of Chapman Avenue to the Haster Retarding Basin. However, due to the deficiency of OCFCD's downstream facilities, this relatively new EGGWC section cannot convey the 100-year storm until the downstream deficiencies are corrected, which may involve installation of pumps.

The project area encompasses two distinct drainage basins: one easterly of State College Boulevard to the Santa Ana River and the second drains westerly via the County Spinnaker Storm Drain to the EGGWC (CO5).

The eastern drainage basin of the project area borders State College Boulevard to the west, the Santa Ana River to the east, the South City Limits (1,100 feet south of Orangewood Avenue) to the south, and the Edison Corridor to the north. This drainage basin is predominantly built-out.

The western drainage basin of the project area borders State College Boulevard to the west, the Santa Ana River to the east, the South City Limits (1,100 feet south of Orangewood Avenue) to the south, and

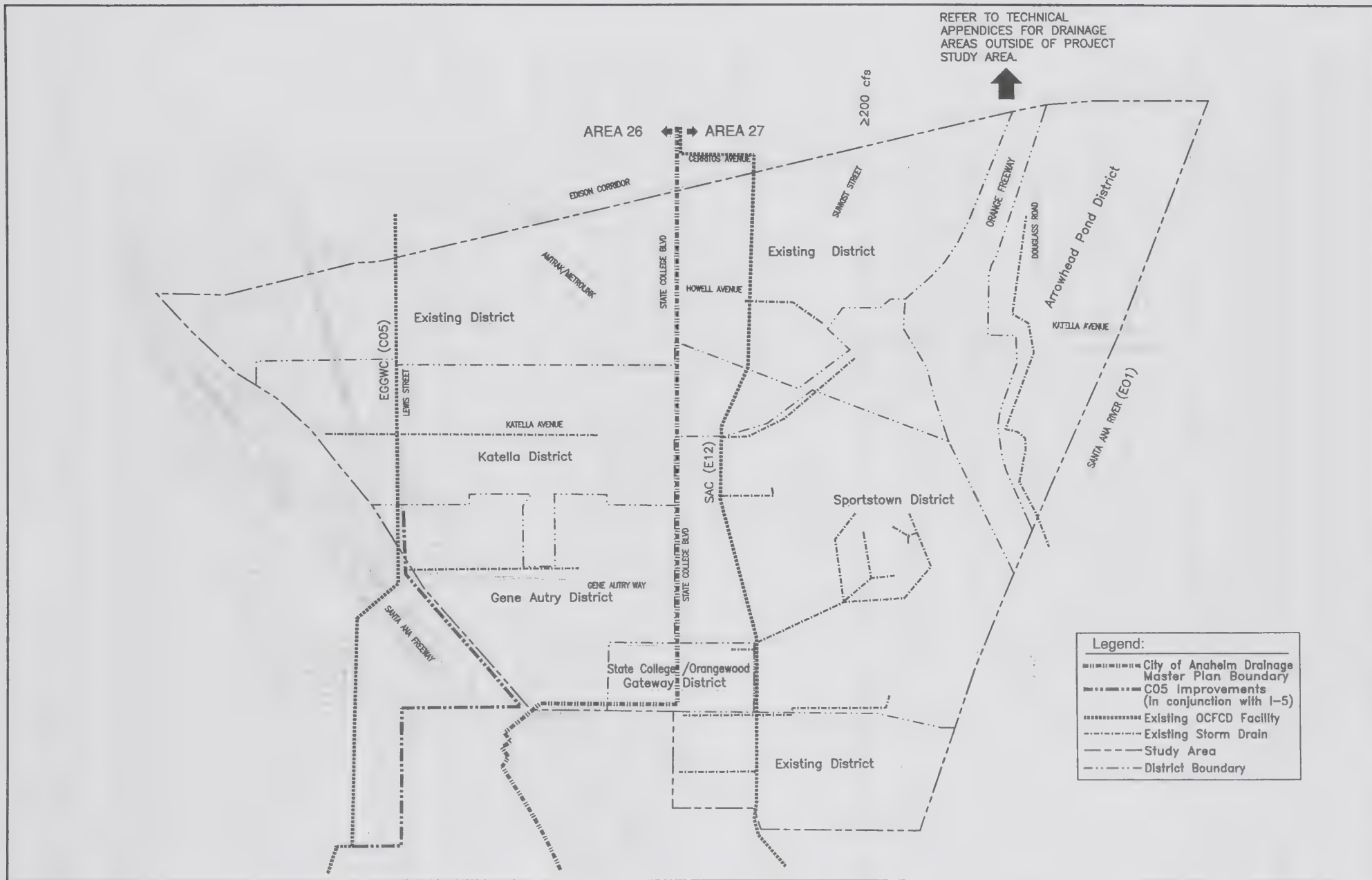
the Edison Corridor to the north. The western drainage basin of the project area drains to the OCFCD's Spinnaker Storm Drain connecting to the OCFCD's EGGWC (CO5) at Chapman Avenue approximately 675 feet west of Lewis Street. The South Central Area Master Plan of Drainage (SCAMPD) discusses and identifies existing and build-out deficient drainage areas subject to flooding and recommends drainage improvements to mitigate deficiencies. In 1973, the City completed a Master Plan for Drainage; dividing the City into 42 drainage areas where the western drainage basin of the project area encompasses a portion of Drainage District 26 as shown on Exhibit 5.8-6.

Storm drain deficiencies within Drainage District 26 have been addressed adequately in the SCAMPD. Most of these drainage deficiencies will be constructed with the construction of the I-5 through the City of Anaheim. Future developments will be responsible for determining whether the recommended drainage improvements need to be extended to adequately serve their project(s) and prevent flooding by submitting detailed drainage reports for review and approval by the City in cases only where the proposed development will increase the impervious surface of the site assumed in the SCAMPD.

The City's standard storm drainage criteria are shown in Table 5.8-13 and should be applied in the design of proposed drainage facilities within the project area.

**TABLE 5.8-13
DRAINAGE DESIGN CRITERIA CHART**

The use of underground storm drain systems shall be required when any one of the following conditions exist:	
a.	Flows will exceed street right-of-way.
b.	Future upstream development will cause drainage problems.
c.	The flood width on arterial highways exceeds the parking lane plus one-half a travel lane or 17 feet from curb face, whichever is less, during a 10-year storm.
d.	The need for cross gutters on arterial highways.
e.	Excess nuisance water in residential areas (surface flow maximum is 1,000 feet).
f.	Median drainage is required.
g.	Flooding of building in a 100-year storm.
h.	Product of depth x velocity is greater than six.
i.	Flooding or street overflow will cause damage.
Design Storm Frequency for Drainage Systems*	
100-Year	Arterial highways in hillside areas, storm drains connecting to the Santa Ana River
25-Year	Arterial highways in flatland areas, local streets in hillside areas, storm drains in sump conditions
10-Year	Local streets in flatland areas, onsite private drainage systems
Source: City of Anaheim Public Works Department 1992 and IWA Engineers, September 1998.	



SOURCE: IWA Engineers



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Exhibit 5.8-6 Existing Storm Drain System

ANAHEIM STADIUM AREA MASTER LAND USE PLAN EIR

The City storm drain lines in the study area were designed and constructed over 25 years ago based on outdated OCFCD criteria. The OCFCD has revised their storm drain design requirements. Evaluation of these existing storm drain lines under the new OCFCD 1986 Hydrology Manual Criteria may indicate that most lines are currently inadequate and can handle less than a ten-year frequency storm event.

Environmental Impacts

Thresholds of Significance

A project is considered to have a significant impact on storm drains if:

- Drainage flows generated onsite can not be accommodated by the local drainage system.
- Drainage distribution lines are not capable of conveying the runoff generated by the project.

Impacts

Storm Water

In the eastern drainage basin of the MLUP, runoff from the project site will be collected by on-site drains, area drains, and catch basins, and directed via a subsurface drainage system to the County regional storm drain facilities, the SAC (E12) or direct into the Santa Ana River (E01). In the western drainage basin, runoff from the project site will be collected by on-site drains, area drains, and catch basins, and directed via a subsurface drainage system to the County regional storm drain facility, the EGGWC (CO5), via the County Spinnaker Storm Drain.

Implementation of the MLUP would result in a nominal amount of additional impervious surface at the project site. Consequently, development of the MLUP the storm water runoff from the site will remain relatively the same. However, this nominal increase would create significant impacts to existing drainage facilities. Therefore, the following drainage improvements would be required to adequately serve the proposed project (see Exhibit 5.8-7).

- As part of the construction of the project, an extension of the existing onsite drainage system of gutters, main line pipes, catch basins, and laterals would be required to mitigate any drainage impacts in accordance with the SCAMPD and/or the revised Drainage District 27 Master Plan of Drainage.
- Alternative storm drain alignments must be explored and drainage improvements proposed to mitigate the existing deficient SAC. This new drainage system will be needed to drain the northerly Cerritos Avenue at State College Boulevard. This system ranging in size from

48-inches to 60-inches will be designed to convey storm runoff of approximately 200 cfs from the above mentioned intersection to the Santa Ana River (EO1) via the SAC (E12) and a path across the stadium property (see Exhibit 5.8-7).

Water Quality

Implementation of the proposed project would result in a minor increase in impervious areas and, therefore, will result in a minor increase in storm runoff conveying pollutants (sedimentation, oil, grease, etc) to the Pacific Ocean. This increase in contaminants to the rivers and ocean is more dependent upon the frequency of rainstorms than the amount of runoff generated. It is not anticipated that any adverse impacts will result to groundwater quality since only a minor increase in runoff would occur. However, grading of the project during construction may temporarily increase stormwater runoff erosion due to the exposure of the underlying soils.

Cumulative Impacts

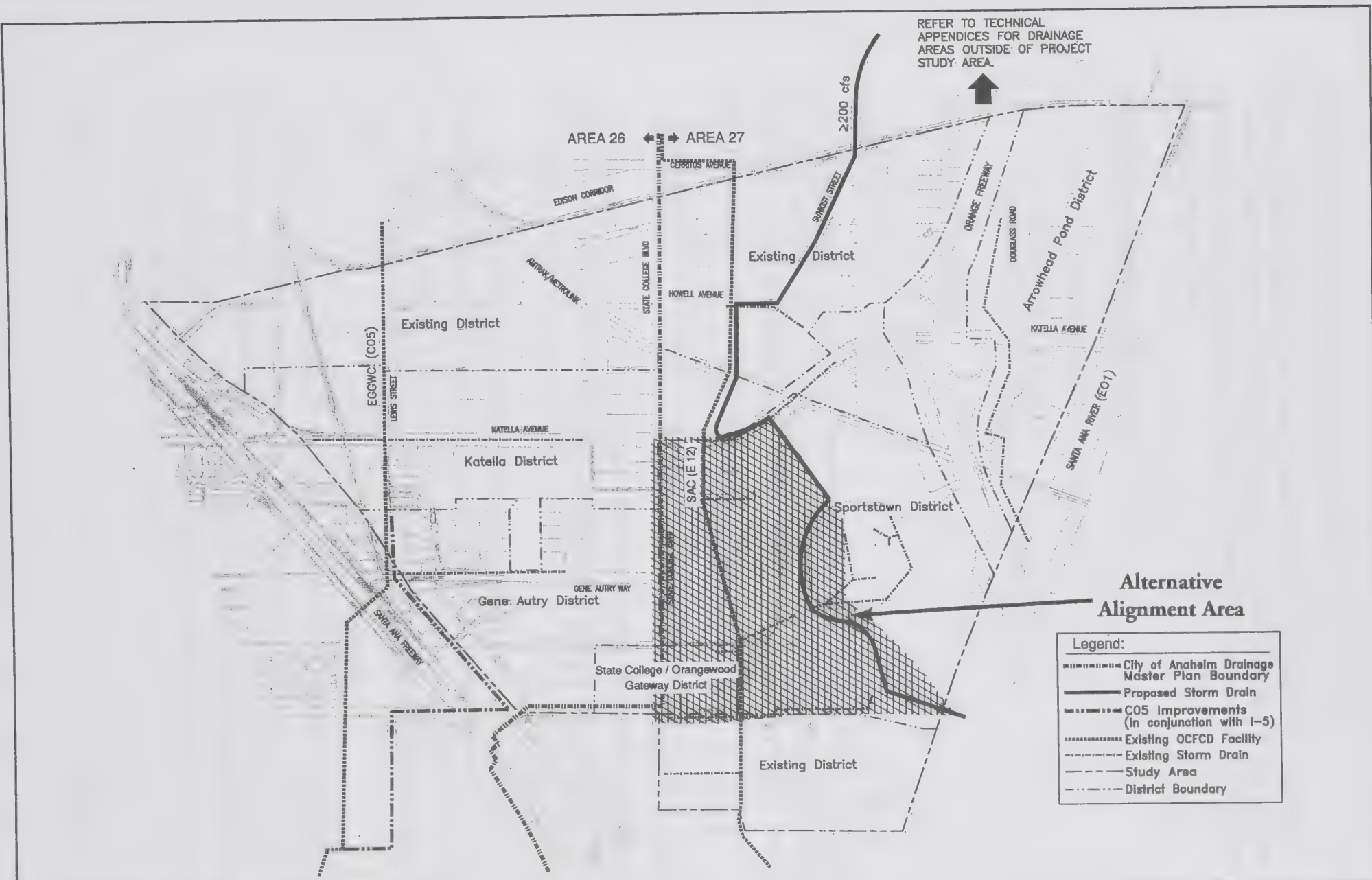
The analysis of cumulative impacts should be considered in conjunction with the analysis of the project's impacts, which provides a more complete discussion of the existing and future storm drain system.

Completing all three improvement projects along the Santa Ana River included in OCFCD's 5-Year Capital Improvement Plan will move the project site and surrounding area out of the 100 year flood plain. Additional minor storm drain flows from the MLUP area will not be affected by cumulative impacts from other developments within the area and surrounding areas because the area is considered built-out and studies completed or in the process of being completed assumed total build-out scenarios in determining deficiencies.

Mitigation Measures

Mitigation Measure 8.8-1. Prior to the development of the project area contained within the 100-year floodplain, a detailed flood study should be performed and the proposed building should be elevated above the 100-year floodplain.

Mitigation Measure 8.8-2. Prior to the issuance of any building permits, a detailed drainage analysis will be required to determine if any project design features (construction of landscape berms or other barriers) will retard or take storm runoff outside the limits of the public right-of-ways. Measures will be required to avoid any flooding effects on downstream properties. Applicable storm drain improvements will be required per the SCAMPD and the revised Drainage District 27 Master Plan of Drainage.



SOURCE: IWA Engineers



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Exhibit 5.8-7 Proposed Storm Drain System

ANAHEIM STADIUM AREA MASTER LAND USE PLAN EIR

Mitigation Measure 8.8-3. The property owner/developer shall apply for a National Pollution Discharge Elimination System construction permit. This permit would require the preparation of a Storm Water Pollution Prevention Plan to mitigate the erosion that may occur from storm water runoff during construction periods.

Significant Unavoidable Adverse Impacts

No significant unavoidable adverse impacts are anticipated.

5.8.9 ELECTRICITY

Environmental Conditions

Regional Setting

The City of Anaheim Public Utilities Department provides electrical services to the project area. Primary power supply for the City comes from the San Onofre Nuclear Power Plant and from the Intermountain Power Plan in Utah via the Southern California Edison (SCE) network. The Doweling Substation supplies an additional 50 megawatts for peaking requirements.

Local Setting

The project site is served by the 250 million volt amperes (MVA) Lewis Substation located on the corner of Cerritos Avenue and Lewis Street, south of Cerritos Avenue, and the 100 MVA Katella Substation is located at the corner of Katella Avenue and Claudina Way.

The project site is currently serviced from the Linda, Marcy and Cindy 12 kV circuits from the Lewis Substation and Mueller, Savi, Kane and Winston 12 kV circuits from the Katella Substation. These circuits, which are adjacent to the project site, are overhead along State College Boulevard, Katella Avenue, and Orangewood Avenue, except for the portions in the existing Stadium parking lot (Exhibit 5.8-8).

As part of the City of Anaheim's 5-Year Utility Underground Conversion Program, the City has approved undergrounding of all the existing and future utilities (69 kV and 12 kV transmission and distribution systems, communication systems, telephone, CAT and associated facilities) along the major roadways in the project area. This includes the future undergrounding of overhead facilities along State College Boulevard from approximately 700 feet north of Orangewood Avenue to La Palma Avenue. This is scheduled for undergrounding in the year 2001.

Electric and Magnetic Fields

Research conducted over the past decade has raised much debate over the health effects associated with electric and magnetic fields, typically referred to as electromagnetic fields (EMF). Electric fields are produced in electrical lines as a result of voltage applied to wiring, and is measured in volts per meter (V/m) or kilovolts per meter (Kv/m). Electric field strength falls off dramatically with distance, and many objects, including trees and houses shield these fields. Most exposure to residential electric fields is a result of internal household appliance use. Magnetic fields are a result of the movement (current) of electricity. These fields are measured in Gauss, however, this measure is extremely large, and fields from electrical lines are generally referred to in milligauss (mg). As with electric fields, magnetic field strength decreases dramatically with distance from the source; however, objects such as trees and buildings do not shield magnetic fields (Bailey Research Associates 1992).

Exposure to electromagnetic fields is an existing circumstance that is typical in urban communities, including Anaheim, and the intensity of EMF varies with the type of electricity source. Whether the fields are originating from household appliances or high voltage transmission lines, public and scientific concern exists regarding the health effects resulting from exposure. The relationship between EMF exposure and health effects has not been scientifically proven; results from the plethora of epidemiological and laboratory studies that have taken place are inconclusive. Scientists for SCE, as well as most scientists to date, have found no threshold value, no dose-response, or no causative relationship that demonstrates evidence of any physical effects from EMF.

Environmental Impacts

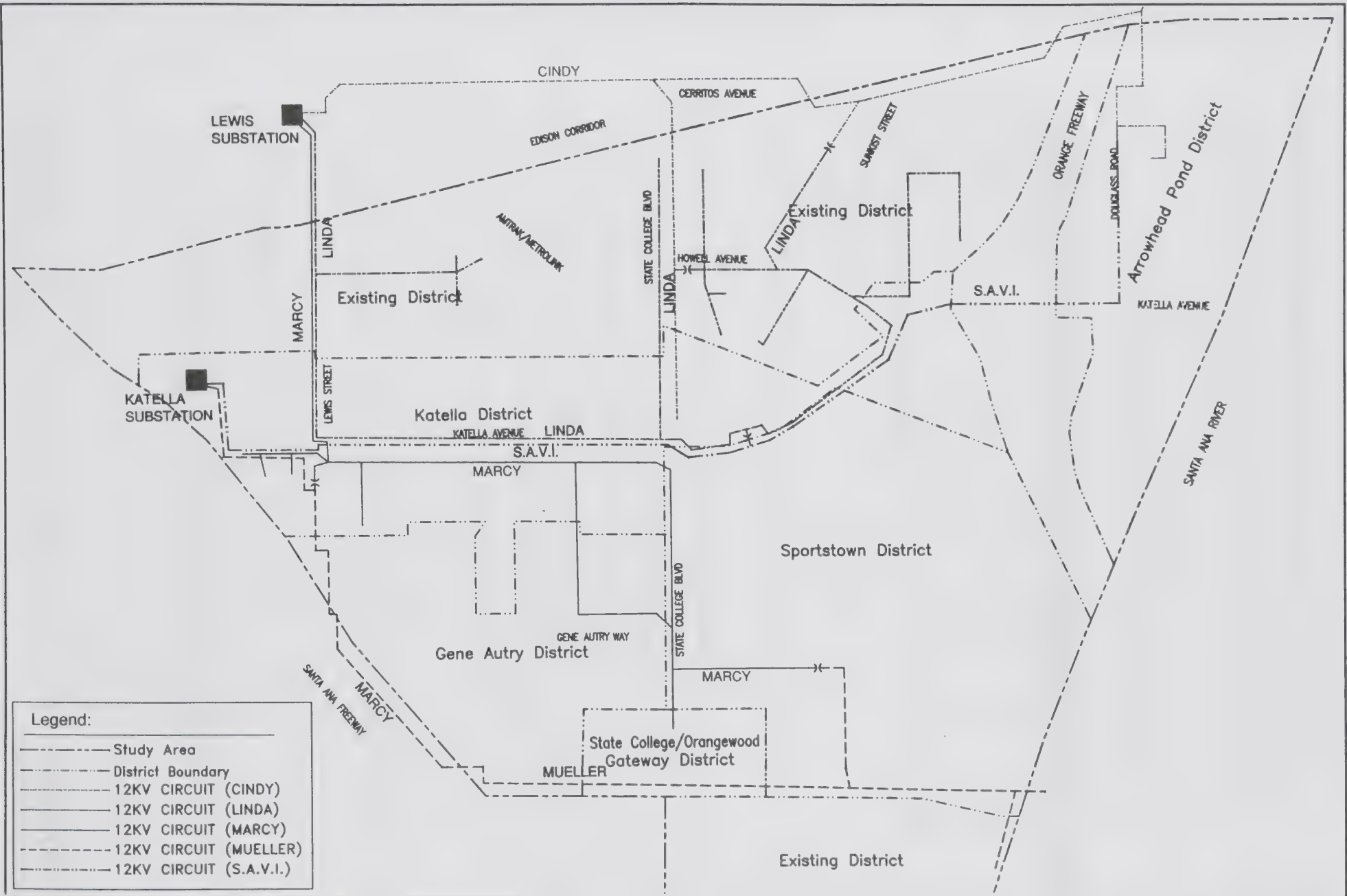
Thresholds of Significance

A project is considered to have a significant impact for electrical service if:

- Existing or future planned facilities and supplies are not adequate to serve proposed land uses.
- Electrical service or lines create a health or safety hazard.

Impacts

Full development of the MLUP project will increase the demand for electricity by approximately 4,459,935 million kWh annually, an estimated 12,219 million kWh on an average day (Table 5.8-14).



Based on existing supplies, the City will be capable of meeting the total estimated additional demand generated by implementation of the proposed project.

TABLE 5.8-14
PROJECTED DAILY ELECTRICITY CONSUMPTION

Component	Area	Consumption Rate (Wh/sf/day)	Electrical Demand (kWh/Day)
<u>Proposed Uses</u>			
Industrial	-491,303	8.75	-4,229
Retail	452,026	6.4	2,893
Office	1,871,285	4.7	8,795
Hotel	991,603	4.8	4,760
Total Project Electricity Consumption			12,219
Wh = watt hour kWh = kilowatt hour sf = square feet			
Source: IWA Engineers, September 1998.			

The City of Anaheim Electrical Engineering Department is responsible for the design of electrical systems throughout the City and within the project site. To ensure that adequate electrical service is provided, development of the proposed project would require the existing onsite electrical system, as identified in Exhibit 5.8-8, to be replaced with new circuits. The Lewis Substation and the Katella Substation presently have spare capacity but distribution may be problematic. The Southwest Substation, located at the corner of Ninth Street and Audre Drive, is an alternate source but is some distance from the project site. The Sportstown District, slated for build-out within the next few years will require two new distribution circuits. Additional circuits will be required as the proposed projects are implemented (IWA Engineers, September 1998).

Consultation with the City's Electrical Engineering Department will ensure that the proposed project will not have any impacts on existing and future planned electrical systems or facilities that would serve the site.

Cumulative Impacts

The study area for electrical service is generally defined by Cerritos Avenue to the north, Chapman Avenue to the south, the I-5 to the west, and the Santa Ana River to the east.

Electrical power will be available to the project area as well as the related projects without a reduction in service to existing customers.

The City of Anaheim Public Utilities Department has indicated that electrical power will be available to new developments within the study area. It is infeasible to calculate the increase in consumption of the projects, but it will be related to factors such as growth and the implementation of conservation measures such as those identified below. Depending upon the magnitude of future developments, improvements may be required to expand local electrical facilities. Improvements will be undertaken on an as needed basis, and a cumulative impact to electrical service in the area is not anticipated. Regional growth and associated energy consumption is described in the Regional/Growth Management Plan EIR (see Section 5.1, Land Use and Related Plans and Policies). No significant cumulative impacts are anticipated.

Mitigation Measures

Implementation of the electrical improvements associated with the proposed project are required to meet the electrical service needs of the site upon completion.

Mitigation Measure 8.9-1. Prior to issuance of each building permit, the property owner/developer shall submit plans showing that each structure will comply with the State Energy Efficiency Standards for Nonresidential Buildings (Title 24, Part 6, Article 2, California Code of Regulations) and will consult with the City of Anaheim Public Utilities Resource Efficiency Division in order to review above Title 24 measures prior to each final building and zoning inspection to incorporate into the project design including energy efficient designs. This consultation shall take place during project design to incorporate into the project design energy efficiency and allow potential systems alternatives such as thermal energy storage air-conditioning and building envelope options.

Mitigation Measure 8.9-2. In order to conserve energy, prior to issuance of each building permit, the property owner/developer shall implement energy-saving practices in compliance with Title 10, which may include the following:

- High-efficiency air-conditions with EMS (computer) control.
- Variable Air Volume (VAV) air distribution.
- Outside air (100 percent) economizer cycle.
- Staged compressors or variable speed drives to flow varying thermal loads.
- Isolated HVAC zone control by floors/separable activity areas.

- Specification of premium-efficiency electric motors (i.e., compressor motors, air-handling units, and fan-coil units).
- Use of occupancy sensors in appropriate spaces.
- Use of compact fluorescent lamps in place of incandescent lamps.
- Use of T-8 lamps and electronic ballasts where applications of standard fluorescent fixtures are identified.
- Use of metal-halide or high-pressure sodium (high intensity discharge) lamps for outdoor lighting and parking lots.
- Consideration of thermal energy storage air conditioning for hotel buildings, meeting facilities, theaters, or other intermittent-use spaces or facilities that may require air-conditioning during summer, day-peak periods.
- Consideration for participation in Resource Efficiency's Programs such as:
 - New Construction Design Review, in which the City cost-shares engineering fees for design of energy efficient buildings and systems.
 - Energy Sale for New Construction - Cash incentives (\$150 to \$400 per kW reduction in load) for efficiency that exceeds Title 24 requirements.
 - Thermal Energy Storage Feasibility Study - Cost sharing of up to \$5,000 for the feasibility study of TES applied to new facilities.

Mitigation Measure 8.9-3. Prior to issuance of each building permit for any buildings requiring a change in electrical service, the property owner/developer shall install an underground electrical service from the Public Utilities Distribution System. The Underground Service will be installed in accordance with the Electric Rules, Rates, Regulations and Electrical Specifications for Underground Systems. Electrical Service Fees and other applicable fees will be assessed in accordance with the Electric Rules, Rates, Regulations and Electrical Specifications for Underground Systems.

Significant Unavoidable Adverse Impacts

Implementation of the mitigation measures listed above will reduce the impact on electrical service to a level considered less than significant.

5.8.10 NATURAL GAS SERVICE

Environmental Conditions

Natural gas service is provided to the project site by Southern California Gas Company (SCG). Existing gas service pipes include a three-inch distribution line along Orangewood Avenue, a six-inch line along State College Boulevard, a six-inch line along Katella Avenue, a three-inch line along Gene Autry Way, and a 12-inch high pressure line along Lewis Street. All lines, with the exception of the high-pressure lines, are 45 pounds per square inch (psi) (Wyngaarden, pers. comm., 1998).

Environmental Impacts

Thresholds of Significance

A project is considered to have a significant impact to natural gas if existing and planned facilities are not adequate to serve the proposed project.

Impacts

Future development within the project site would result in the demand for natural gas services. This demand would be associated with the proposed hotels and accessory uses, such as restaurants and commercial retail use (see Table 5.8-15). Project development is estimated to consume 131,175 million British Thermal Units (MBTU) annually.

Gas service will be added to the existing system by SCG as necessary to meet the requirements of individual development projects with the project site. SCG has indicated that it will be able to supply the project with natural gas without impacting existing service (Warth, pers. comm., 1998). There will be no significant impacts from the project to natural gas service.

**TABLE 5.8-15
PROJECTED DAILY NATURAL GAS CONSUMPTION**

Component	Area	Load (cf/sf/yr)	Natural Gas Consumption (MBTU/yr)
<u>Proposed Uses</u>			
Industrial	-491,303	34.8	-17,097
Office	1,871,285	34.8	65,120

TABLE 5.8-15 (continued)

Component	Area	Load (cf/sf/yr)	Natural Gas Consumption (MBTU/yr)
Retail	452,026	57.6	26,036
Hotel	991,603	57.6	57,116
Total Project Natural Gas Consumption			131,175
cf cubic feet			
sf square feet/square foot			
yr year			
MBTU million British Thermal Units			
Source: Michael Brandman Associates, September 1998.			

Cumulative Impacts

The study area for natural gas is generally defined by Cerritos Avenue to the north, Orangewood Avenue to the south, Euclid Street to the west, and the Santa Ana River to the east, and would include those areas that contain relocated projects within the City of Orange.

The total demand generated by the proposed project is 131,175 MBTU annually. The related projects are not concentrated in one area and SCG can meet the energy needs of the related projects without adverse impacts to surrounding uses. The total cumulative demand is not considered to be significant, including growth in the surrounding areas, because of the amount of the substantial reserves available, as identified by SCG.

Therefore, no significant cumulative impacts are anticipated.

Mitigation Measures

Although no significant impacts are projected, the following mitigation measure will reduce the use of natural gas resources.

Mitigation Measure 8.10-1. Prior to the issuance of each building permit, the property owner/developer shall submit plans for review and approval which shall ensure that buildings are in conformance with the State Energy Conservation Standards for Nonresidential Buildings (Title 24, Part 6, Article 2, California Administrative Code).

Significant Unavoidable Adverse Impacts

The SCG Company has indicated that they will be capable of meeting the energy needs of the future developments within the project area without adverse impacts on the surrounding uses; therefore, no significant unavoidable adverse impacts are anticipated.

5.8.11 CABLE SERVICE AND TELEVISION RECEPTION

Environmental Conditions

Broadcast television is provided by public stations throughout the Greater Orange County region. Currently, Century Communications Corporation (CCC) provides cable television service to the project site via underground conduits. Major underground cable conduits serving the existing project site extend from outside of the project site, east of State College Boulevard to approximately 350 feet south of Katella Avenue. Major underground conduits also run along the north side of Katella Avenue, from State College Boulevard to Lewis Street (Brickner, pers. comm., 1998).

Environmental Impacts

Thresholds of Significance

A project is considered to have a significant impact on cable service and television reception if service or reception is interrupted for a substantial period of time.

Impacts

Future development planned for the MLUP would result in requests for cable television services, particularly at hotels and restaurants. During construction of street improvements, existing cable television facilities will need to be relocated underground or otherwise redesigned in order to accommodate new accounts. According to CCC, no adverse impacts on cable service to existing customers are anticipated (Brickner, pers. comm., 1998).

Multi-story hotels or other tall structures physically interfering with reception within the project area might negatively impact television reception of residents and businesses currently without cable television service.

Cumulative Impacts

The study area for television service is generally defined by the Edison Corridor to the north, Anaheim City Limit to the south, Santa Ana Freeway to the west, and the Santa Ana River to the east, including those areas where related projects within the City of Orange are located. The cable service study area is the City of Anaheim.

Implementation of related projects and the eventual buildout of the area may create temporary disruption of television service at area residences. As described previously, projects with multi-story structures will be required to mitigate any impacts on television reception created by these structures; therefore, no cumulative impact is anticipated. No cumulative impacts to cable service are expected (Brickner, pers. comm., 1998).

Mitigation Measures

Mitigation Measure 8.11-1. If deemed necessary, within 6 months after completion of building exteriors of new developments over 75 feet in height, a study of area television reception shall be undertaken by the property owner/developer and submitted to the City Engineer for review and approval. If the City of Anaheim determines that the proposed project creates a significant impact on broadcast television reception at local residences and other existing hotels/restaurants or other businesses, a signal booster or relay system shall be installed by the property owner/developer immediately on the roof of the tallest project building to restore television reception to its original condition.

Significant Unavoidable Adverse Impacts

With the implementation of the mitigation measure discussed above, no significant adverse impacts on local television service/reception and cable service are anticipated.

5.8.12 TELEPHONE SERVICE

Environmental Conditions

Pacific Bell Telephone Company (Pacific Bell) provides telephone service to the project site via underground conduits and above-grade pole lines. Underground telephone conduits that serve the existing uses at the project site are located throughout the project area. Additionally, Pacific Bell can provide fiber optics to facilitate high-capacity digital service.

Environmental Impacts

Thresholds of Significance

A project is considered to have a significant impact on telephone service if existing or future planned facilities and supplies are not adequate to serve proposed land uses or existing telephone service is notably disrupted.

Impacts

Development of individual projects within the project site will increase the demand on the telephone service system. Additionally, there may be an increased demand for fiber optic service because it will be useful for providing teleconferencing facilities within the hotels. Telephone service will remain on standard copper wire.

Undergrounding of existing overhead telephone lines, extension of fiber optic service, and other upgrading will be provided by Pacific Bell, or any other communication provider, as needed, to serve future development within the project site. According to Pacific Bell, it will be able to meet the needs of the project without impacting existing customer service (Brown, pers. comm., 1998). Telephone service will be provided in accordance with requirements of, and at rates and charges specified in, its scheduled tariffs on file with the California Public Utilities Commission.

Cumulative Impacts

The study area for telephone service is generally defined by Cerritos Avenue to the north, City of Anaheim City Limit to the south, I-5 Freeway to the west, and the Santa Ana River to the east.

Implementation of the proposed project and related projects within the Pacific Bell service area may require expansion of existing telephone facilities and services. Pacific Bell has indicated that it will have no difficulty in servicing additional development from the proposed project and related projects; therefore no impact on telephone service to existing customers is anticipated (Brown, pers. comm., 1998).

Mitigation Measures

No mitigation measures are required.

Significant Unavoidable Adverse Impacts

No significant unavoidable impacts are anticipated.

5.9 HAZARDOUS MATERIALS COMPLIANCE

To determine the presence of suspected or known hazardous waste contamination sites on or adjacent to the subject property, a computerized database search of various governmental agency lists was conducted by Vista Environmental Information on November 12, 1997 (see Appendix G). CEQA requires the lead agency to consult the lists of hazardous waste sites compiled by various state agencies (the California Environmental Protection Agency [EPA], the Department of Health Services, the State Water Resources Control Board, and the California Integrated Waste Management Board) pursuant to Governmental Code Section 65962.5 (CEQA, Cal. Pub. Resources Section 21092.6). The Vista database search included review of all of the required state lists and also included a search of various federal (U.S. EPA) and local (Orange County Health Care Agency) hazardous waste sites lists. A complete description of each database searched is included at the end of the Vista report. In accordance with CEQA, the California Regional Water Quality Control Board (RWQCB) was also contacted regarding any Cease and Desist Orders or Cleanup and Abatement Orders issued for uses on the project site. Lastly, the OCWD was contacted regarding the quality of groundwater, as determined through well testing, beneath the subject site

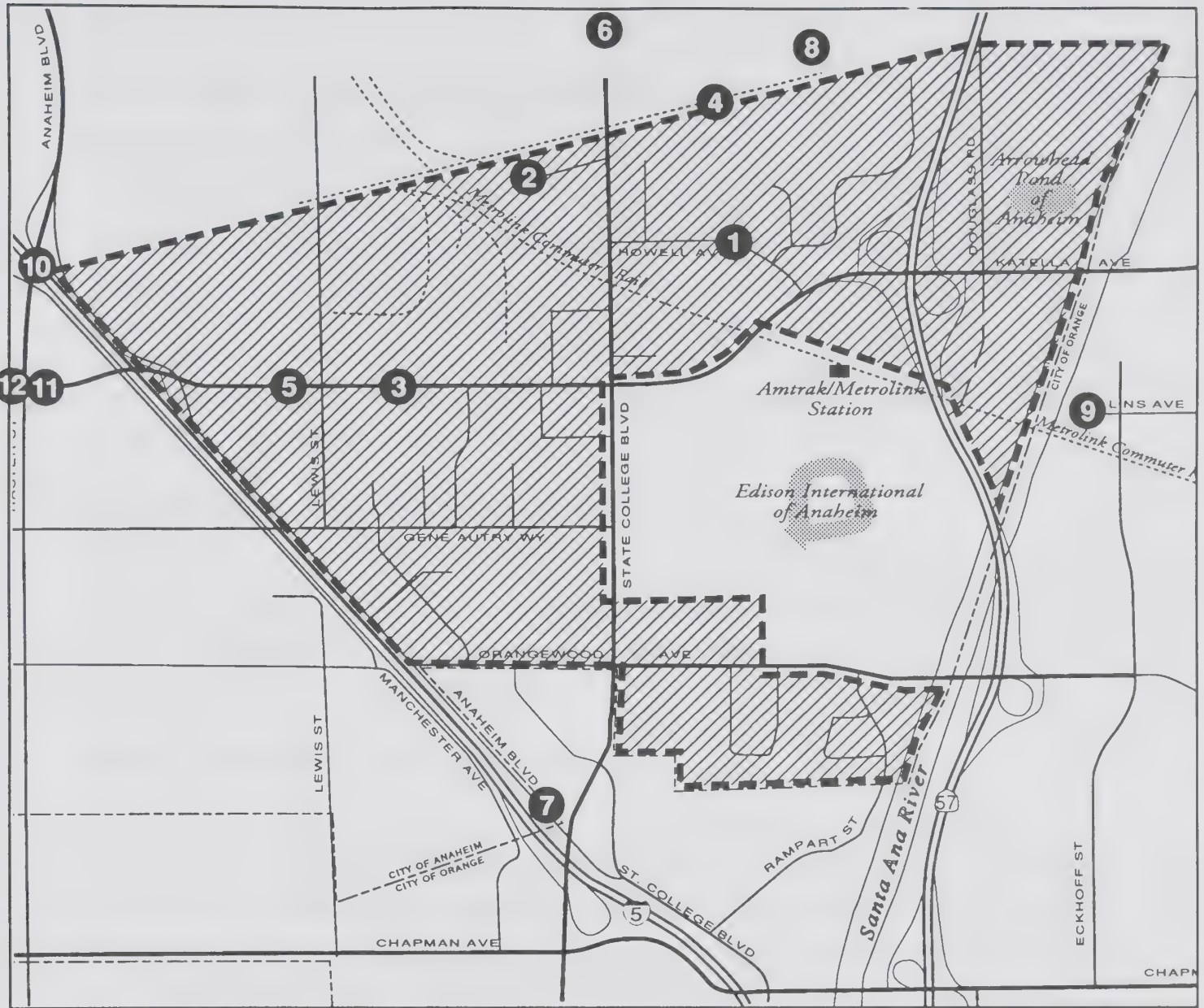
5.9.1 ENVIRONMENTAL CONDITIONS

The following is a summary of active known or suspected contamination sites on and within 0.25-mile of the project site as identified by the Site Assessment Plus Report (SAPR) prepared by Vista Environmental Information, Inc. on November 26, 1997 and updates in July 1998. The location of the sites is shown on Exhibit 5.9-1 and listed in Table 5.9-1. Sites that have underground storage tanks or as generators of hazardous waste but which are not also identified as having hazardous waste contaminated are not included.

As indicated in Table 5.9-1, 12 known or potential hazardous materials and/or waste contamination sites are located on and within 0.25 mile from the project site. Eleven of these sites are known to have had leaking underground storage tanks (LUST). The other site is a solid waste disposal facility in which their operation permit is currently under review. Of the 11 LUST sites, a site investigation has occurred and a remedial action plan has been prepared and, in some cases, remediation is currently underway. The contamination that has occurred at these sites from unauthorized releases of hazardous materials and/or waste at has affected both soil/sand/land and groundwater.

TABLE 5.9-1
LOCATION OF SITES INCLUDED ON AGENCY LISTS
WITHIN A QUARTER MILE OF THE MLUP AREA

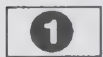
Map ID	Name/Address	Identified by	Current Status
1	Itasco 2211 E Howell St Anaheim, CA 92804	LUST	Site Investigation, Affected Media: Soil/Land/Sand.
2	Norco Delivery Services Inc. 1500 E Babbitt Anaheim, CA 92805	CORTESE, LUST	Monitoring Leaking Diesel Tank on aquifer.
3	Quong Enterprises Office: 1111 E. Katella Anaheim, California	SWLF	Solid Waste Disposal Facility. Permit Under Review.
4	Neville Chemical 2201 Cerritos Ave E. Anaheim, CA 92806	SCL, LUST	Solvent Leak to Groundwater/Soil. Remediation Started.
5	United Couriers 818 E. Katella Ave Anaheim, CA 92801	CORTESE, LUST	Waste oil affecting Soil/Land/Sand. Remediation Action Plan.
6	Pacific Scientific 1350 State College Blvd. S. Anaheim, CA 92806	CORTESE, LUST	Trichloroethylene leak to aquifer. Remediation action taken.
7	CO Thompson Petroleum Co, 531 N. Anaheim Orange, CA 92668	CORTESE, LUST	Gasoline leak to aquifer. Remedial Action Plan.
8	West Coast Irrigation Supply 1441 S. Sunkist Anaheim, CA 92806	LUST	Gasoline leak to Soil/Land/Sand. Remedial Action Plan.
9	Inland Specialties Chemical 2023 W. Collins Ave Orange, CA 92667	LUST	Solvent leak to groundwater, soil. Remedial action: Other.
10	Ryder Truck Rental 1730 S. Anaheim Anaheim, CA 92805	LUST	Waste Oil to Soil/Land/Sand. Remedial Action Plan.
11	Mobil Station 100 E. Katella Anaheim, CA 92802	CORTESE, LUST	Gasoline leak to aquifer. Remedial Action Plan.
12	Texaco 100 W. Katella Anaheim, CA 92802	CORTESE, LUST	Gasoline leak to aquifer. Remedial Action Taken.
LUST: Leaking Underground Storage Tank			
Source: Vista Environmental Information, Inc. 1998			



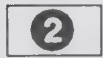
LEGEND



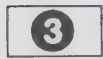
Project Site Location



1 Itasco: 2211 E. Howell St.



2 Norco Delivery Services, Inc: 1500 E. Babbitt Ave.



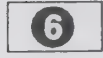
3 Quong Enterprises: 1111 E. Katella Ave.



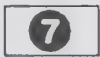
4 Neville Chemical: 2201 Cerritos Ave, E.



5 United Couriers: 818 E. Katella Ave.



6 Pacific Scientific: 1350 State College Blvd. S.



7 CO Thompson Petroleum Co: 531 N. Anaheim Blvd.



8 West Coast Irrigation Supply: 1441 S. Sunkist Ave.



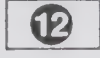
9 Inland Specialties Chemical: 2023 W. Collins Ave.



10 Ryder Truck Rental: 1730 S. Anaheim Blvd.



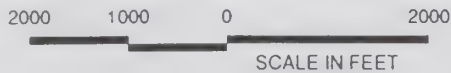
11 Mobil Station: 100 E. Katella Ave.



12 Texaco: 100 W. Katella Ave.



Michael Brandman Associates



Contacted Agencies

Information received from the OCWD indicates that there are two wells located on the proposed project site. The first well, identified by the OCWD as SAR-3, is a monitoring well located on the eastern border of the project area near the point where SR-57 crosses the Santa Ana River channel. The second well, identified by the OCWD as A-33, is a production well located to the south of the existing stadium. The most recent groundwater sample results taken in April and May 1995 at wells SAR-3 and A-33, respectively, indicated that the groundwater at both wells meets OCWD's primary drinking water standards (OCWD 1998).

Historical Use of Hazardous Materials and Waste

Based on a review of historical aerial photographs of the project area, there is the potential that hazardous materials, such as various fuels and pesticides/herbicides from historical agricultural activities were used. However, as indicated above, no records were found in agency files indicating significant levels of contamination from past land uses.

Existing Use of Hazardous Materials and Waste

Various hazardous materials are currently used and stored by businesses within the project area. Such materials include cleaning chemicals, fuels and other hydrocarbon products, solvents, etc., used during operations of the facilities and for maintenance purposes. All hazardous waste generated onsite is disposed of at an appropriate offsite facility. Businesses are required to obtain permits and maintain records regarding the storage, use and disposal of hazardous material.

5.9.2 ENVIRONMENTAL IMPACTS

Thresholds of Significance

For the purpose of this analysis, an impact related to hazardous materials compliance is considered significant if:

- The exposure of people or the environment to hazardous materials is in excess of federal, state, or local regulatory standards.

Historical and Existing Use of Hazardous Materials and Waste

As indicated previously, 12 known or suspect hazardous materials and/or waste sites having the potential to contribute to hazardous materials and/or waste contamination within the project area were identified on and/or within 0.25 mile of the site. Eleven of these sites are known to have had leaking

underground storage tanks (LUST). The other site is a solid waste disposal facility in which their operation permit is currently under review. Of the 11 LUST sites, a site investigation has occurred and a remedial action plan has been prepared and, in some cases, remediation is currently underway. The media affected from unauthorized releases of hazardous materials and/or waste at these sites includes both soil/sand/land and groundwater. Regardless, the fact that the responsible party has been identified and/or potential contamination is being addressed in accordance with existing federal, state, and local guidelines suggest that these site would not create a significant impact as it relates to the threat of individuals being exposed to onsite contamination from potential and/or known hazardous materials and/or waste sites.

There is the potential that previously unknown hazardous materials contamination from historical use of the property, (pesticides/herbicides, etc.) onsite, may be encountered during project development activities. However, it should be noted that should such contamination exist, existing federal, state, and local policies and procedures would require the delineation and remediation of sites containing hazardous substances to the satisfaction of the designated local enforcement agency. In addition, it is unlikely that any such contamination would be extensive or beyond the capabilities of typical remediation measures. Therefore, no significant impacts from former uses of the property are anticipated.

Future Use of Hazardous Materials and Waste

Implementation of the MLUP will result in the additional use and storage of hazardous materials and in an increase in the amount of hazardous waste generated onsite. However, continued compliance by onsite uses with regulations, standards, and guidelines established by EPA, state, county and local agencies relating to the storage, use, and disposal of hazardous waste will reduce the potential risk of hazardous materials exposure to a level less than significant.

5.9.3 CUMULATIVE IMPACTS

The study area for cumulative effects of hazardous materials exposure is an area extending 0.25 mile from the boundary of the site. As indicated above, there are no significant impacts expected to occur with implementation of the MLUP. As such, there are no cumulative impacts.

5.9.4 MITIGATION MEASURES

Although no significant hazardous materials exposure impacts are anticipated, the following mitigation measures are included to ensure that any potential impacts associated with the project are reduced to a level less than significant.

Mitigation Measure 9-1. Ongoing during demolition and construction, in the event that hazardous waste is discovered during site preparation or construction, the property owner/developer shall ensure that the identified hazardous waste and/or hazardous material is handled and disposed of in the manner specified by the State of California Hazardous Substances Control Law (Health and Safety Code, Division 20, Chapter 6.5) and according to the requirements of the California Administrative Code, Title 30, Chapter 22.

Mitigation Measure 9-2. The applicant shall handle and dispose of all hazardous materials and wastes during the operation and maintenance of facilities in accordance with the state codes identified in Mitigation Measure No. 2 above.

5.9.5 SIGNIFICANT UNAVOIDABLE ADVERSE IMPACTS

Implementation of mitigation measures will reduce potential hazardous materials exposure impacts to a less than significant level.

5.10 AESTHETICS

The following analysis addresses visual resources from a number of viewing locations within the project area and the potential for impacts to occur at these locations related to the changes in visual conditions as a result of implementation of the Anaheim Stadium Area MLUP.

5.10.1 ENVIRONMENTAL CONDITIONS

Visual Setting

The proposed project is located in an area of the City of Anaheim that contains relatively flat topography. The variety and intensity of existing land uses within the project site and surrounding areas create a setting that is urban in character. There are no distinct natural landscape features or natural visual resources or vistas within the project area, nor is there any natural open space onsite. There are several relatively large areas of open space that are typically surrounded by commercial and industrial uses and contain no significant visual resources. Please refer to Section 5.1, Land Use and Related Planning Programs, of this EIR, for a detailed description of existing land uses within and around the project area.

Due to the subject's flat topography, large area, and relatively dense development, existing views within and surrounding the project site are generally limited. Views along the I-5, SR-57, Santa Ana River, and Amtrak/Metrolink right-of-way offer the most expansive vantages of the project site. The area surrounding the Stadium and the Pond provide the most significant viewsheds within the project area. Both the stadium area and the Pond can be seen from many surrounding uses and streets within the project vicinity.

Typically, major arterial streetscapes within the project area (i.e., Katella Avenue, State College Boulevard, and Orangewood Avenue) are dominated by newer commercial/office buildings and somewhat older light industrial complexes, limited retail, associated landscaping, and overhead utility lines. No scenic corridors or highways are located in the vicinity of the project site.

Structures within the project area range from one to multiple stories in height. Taller structures, consisting mostly of office space, are located in the southwestern portion of the project site as well as some taller hotel uses near the stadium area along State College Boulevard.

Zoning Standards

The project site is currently zoned predominantly ML (Limited Industrial), CO (Commercial Office and Professional, and PR (Public Recreation) which includes the Stadium and the Pond. Additional zoned uses within the project area include RS-A-43,000 (Residential/Agricultural). Primarily

industrial zones surround the project area to the north, some residential uses to the south, the Santa Ana River to the east, and I-5 to the west.

Shade, Shadow, and Illumination

In general, the cast of shadows from structures currently located on the project site is not significant. These areas include the parking areas adjacent to the Stadium and the Pond; the area with high-rise office uses at the intersection of State College Boulevard and Orangewood Avenue, and several taller structures along Katella Avenue adjacent to the Stadium.

Due to the urbanized setting, night lighting is widespread throughout the project area. This lighting adds to the ambient light within the project area. Existing ambient sources of nighttime lighting within the project area are characterized by neon and fluorescent signage associated with commercial and retail land uses. Additional sources include parking lot lighting, structural lighting for hotels and restaurants, overhead street lighting along roadways, lighting from vehicle headlights and sign/building illumination, and lighting during nighttime sporting events at the stadium and to a lesser extent from the Pond.

Views From Surrounding Uses

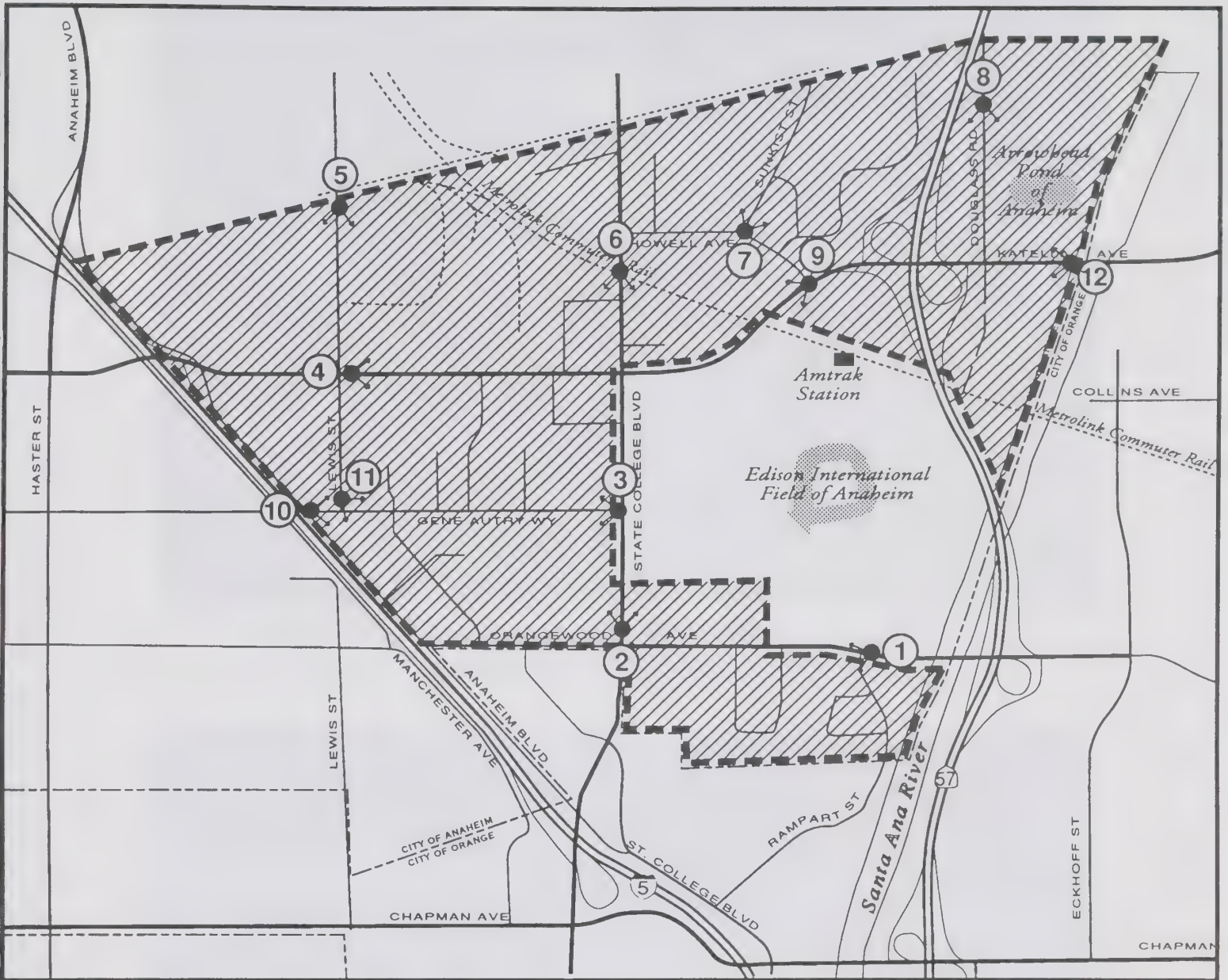
The project site is adjacent to industrial uses to the north; commercial, industrial, and residential uses to the south; the Santa Ana River and SR-57 to the east; and the I-5 to the west. Views of the project area from the adjacent freeways are relatively expansive, providing significant views of the Stadium and the Pond areas to the east, as well as the various commercial, industrial, and retail uses to the west. Views of the project site from the north and south are generally more limited but still provide significant visual access.

View From Onsite Uses

Photographs were taken to represent the existing visual conditions within and around the project area. Exhibit 5.10-1, Photograph Location Map, provides a graphic illustration of views of the site from within and the surrounding area. This exhibit also depicts the direction in which these photographs were taken. Exhibits 5.10-2 through 5.10-7, Project Site Photographs, show the identified areas.

Viewpoint Location 1

This is a view within the southern portion of the project site looking east along Orangewood Avenue, just west of the Santa Ana River, along the southern section of the Stadium parking area. Views within this area consist of the Stadium area, mid-rise commercial office development, and associated landscaping and utilities lines (see Exhibit 5.10-2).



LEGEND



Project Site Location



Viewpoint Location



NORTH

2000' 1000' 0' 2000'



Michael Brandman Associates

19870002 • 7/98

exhibit 5.10-1
Photograph Location Map

ANAHEIM STADIUM AREA MASTER LAND USE PLAN EIR



Location 1: View from the southern portion of the project site looking west along Orangewood Avenue, just west of the Santa Ana River.



Location 2: View from the southern portion of the project site looking north from the intersection of State College Boulevard and Orangewood Avenue.



Location 3: View from the stadium parking area looking west along Gene Autry Way at the intersection of State College Boulevard.



Location 4: View from the western portion of the project site looking east along Katella Avenue at the intersection of Lewis Street.





Location 5: View from the northwestern portion of the project site along Lewis Street at the Edison Corridor.



Location 6: View from the central portion of the project site along State College Boulevard at the intersection of the Amtrak/Metrolink railway crossing.





Location 7: View from the north/central portion of the project site looking northeasterly along Sunkist Street at the intersection of Howell Avenue.



Location 8: View from the northeastern portion of the project site looking south along Douglass Road.





Location 9: View from the central/northeastern portion of the project site looking southwest along Katella Avenue, just northeast of the Amtrak/Metrolink railway crossing.



Location 10: View from the western portion of the project site looking east along Gene Autry Way at the intersection of Lewis Street.





Location 11: View from the western portion of the project site looking southeast along Lewis Street, just north of Gene Autry Way.



Location 12: View from the eastern portion of the project site facing west along Katella Avenue, just west of the Santa Ana river.



Viewpoint Location 2

This photograph was taken from the southern portion of the project site, looking north along State College Boulevard, just north of the intersection of Orangewood Avenue. Visible along this major arterial are low-rise commercial and light industrial uses, vacant land, landscaping, and overhead utility lines (see Exhibit 5.10-2).

Viewpoint Location 3

This is a view from just inside the stadium area-facing west along Gene Autry Way at the intersection of State College Boulevard. This view contains retail/entertainment uses, low-rise commercial development, and significant amounts of street landscaping and overhead utility lines (see Exhibit 5.10-3).

Viewpoint Location 4

This photograph was taken from the western portion of the site, looking east along Katella Avenue at the intersection of Lewis Street. Visible in the foreground are retail commercial uses, landscaping along the northern portion of Katella Avenue adjacent to low-rise commercial development, with high-rise development visible in the background. Overhead utility lines are also visible (see Exhibit 5.10-3).

Viewpoint Location 5

This view is from the northwest portion of the project site facing south on Lewis Street at the Edison Corridor. Prominent features in this area include relatively dense landscaping bordering low-rise commercial uses, overhead utility lines including high voltage towers and an electrical substation (see Exhibit 5.10-4).

Viewpoint Location 6

This photograph was taken from the central portion of the project site facing south on State College Boulevard at the intersection of the Amtrak/Metrolink railway crossing. Visible within the foreground are low-rise commercial and retail uses, vacant land, and overhead utility lines with high-rise office development further south across Katella Avenue in the background (see Exhibit 5.10-4).

Viewpoint Location 7

This is a northeasterly view along Sunkist Street at Howell Avenue within the north/central portion of the project site. This area consists predominantly of low-rise commercial and light industrial uses with landscaping bordering the street. Visible in the background are numerous high voltage towers (see Exhibit 5.10-5).

Viewpoint Location 8

This is a view from the northeastern portion of the project site facing south along Douglas Road. The Pond dominates the view in the background, with surrounding parking uses, vacant land, and landscaping and overhead utilities visible in the foreground (see Exhibit 5.10-5).

Viewpoint Location 9

This view within the project site faces southwest along Katella Avenue, just north of the Amtrak/Metrolink railway crossing. Visible in the foreground are medium-rise commercial office and associated landscaping and overhead utilities, commercial/retail, with the undercrossing for the Amtrak/Metrolink link in the background (see Exhibit 5.10-6).

Viewpoint Location 10

This is a view from the western portion of the project site looking east along Gene Autry Way at the intersection of Lewis Street. Construction associated with the widening of the I-5 is visible, in addition to areas of vacant land, commercial and light industrial uses, and associated landscaping. Overhead utility lines are also visible from this viewpoint (see Exhibit 5.10-6).

Viewpoint Location 11

This is a view from the western portion of the project site looking southeast along Lewis Street, just north of Gene Autry Way. Construction associated with the widening of the I-5 is visible, in addition to some overhead utility lines, construction trailers, and construction vehicles. Office/professional uses and associated landscaping are visible in the background (see Exhibit 5.10-7).

Viewpoint Location 12

This view is from the eastern portion of the project site facing west along Katella Avenue, just west of the Santa Ana River. These views consists of commercial/retail uses adjacent to Katella Avenue, the

Pond, overhead street lighting, and a landscaped median which includes an Anaheim entry monument. Office/professional uses and SR-57 are visible in the background (see Exhibit 5.10-7).

5.10.2 ENVIRONMENTAL IMPACTS

Thresholds of Significance

For the purpose of this analysis, an impact on the visual and aesthetic nature of the area is considered to be significant if the project would result in:

- Substantial obstruction and/or demonstrable negative effect on views.
- Substantial deterioration of the perceived aesthetic character of a visual asset or scenic easement.
- Substantial visual incompatibilities arising from introduction of development into existing open space.

Visual Character Effects/Affects on Views

As described in Section 3, Project Description of this EIR, the implementation of the proposed Anaheim Stadium Area MLUP may involve demolition or renovation of existing structures and construction of new structures in the project area as well as implementation of a comprehensive landscaping scheme along the major streets throughout the site. A buildout of approximately 13.3 million square feet of development is allowable under the MLUP.

The MLUP divides the project area into six districts. These districts and the building characteristics are summarized in Table 5.10-1 below.

During implementation of the project, it is expected that views within the site and of the site from surrounding areas would be altered due to construction activity. These activities include grading and site preparation, building construction, along with the presence of construction equipment and building materials. In addition, implementation of the comprehensive landscaping plan associated with the MLUP will require similar activities in the form of grading and installation of plant materials. These construction-related view impacts would affect views within and surrounding the project area. As implementation of the MLUP will occur over an extended period of time, the impacts, while individually short-term, can be considered long-term taken together. However, due to the staged nature of implementation of the MLUP and the overall scale of activity relative to the project area, these impacts are not considered significant.

TABLE 5.10-1
MASTER LAND USE PLAN
DISTRICT BUILDING CHARACTERISTICS

District	Max Bldg. Ht.	FAR	Site Coverage
Existing District (A)	100 Feet	0.3	70%
Katella District	250 Feet	1.0	80%
Gene Autry District	50 Feet	0.4	70%
State College/Orangewood Gateway District	100 Feet	0.5	50%
Existing District (B)	100 Feet	0.3	70%
Existing District (C)	100 Feet	0.45	70%
Sportstown District	No Limit	N/A	70%
Arrowhead Pond District ^a	150 Feet	1.0	70%
FAR: Floor area ratio.			
^a The Arrowhead Pond of Anaheim has a maximum building height of 100 feet, a 0.45 FAR, and 70% site coverage.			
Source: SWA Group 1998.			

Development of the MLUP project area will result in an intensification of the existing urban character of the project area. Due to the relatively flat topography of the project area, this will impact the views within and surrounding the project area, particularly in areas in which taller buildings are constructed. However, the implementation of the proposed MLUP will result in an architecturally consistent, well-landscaped setting. Therefore, no significant visual impacts are expected to occur within the project site.

Views from surrounding uses, and the adjacent I-5 and SR-57 freeways to the west and east, respectively, will be impacted by implementation of the MLUP. Along with the various circulation-related improvements planned, the urban design features of the MLUP will create special view corridors along the freeways in the vicinity of the project area. These corridors will significantly enhance the aesthetic nature of the project area. Views from the north and south will also benefit from the various visual enhancements envisioned within the MLUP. Thus implementation of the proposed MLUP will not result in a significant impact on surrounding uses.

Given the location of the project site in an area that has been highly urbanized with industrial, commercial and recreational uses, the project will not result in significant deterioration of the visual character in the project vicinity. Rather, the development of the project area will result in aesthetically enhancing the site and surrounding area.

Consistency with Zoning Standards

Implementation of the proposed project will be accompanied by approval of a Zoning Overlay. The Zoning Overlay permits the regulations and standards of the underlying zone to be preserved, while adding special provisions, which may apply when a property is developed under the provisions of the MLUP. The intent of using the Zoning Overlay is to permit the current uses to continue or expand within the provisions of existing zoning, while providing those who may want to develop retail, hotel, entertainment and office uses with standards appropriate to those uses, including increased land use intensity. The Zoning Overlay will also provide a means to adopt design guidelines for specific areas of the MLUP.

Shade, Shadow, and Illumination

Maximum building heights within the proposed project area will range from 50 to 250 feet in height. More specifically, building heights of up to 100 feet will occur along the perimeter of the project site, including up to 100 feet in the Gateway District at the southern portion of the project area. Thus, shade and shadow impacts to surrounding offsite uses may occur as a result of project implementation. Maximum building heights within the Katella District and the Arrowhead Pond District are 250 feet and 150 feet, respectively. Development at this intensity has the potential to create substantial shade and shadow impacts upon adjacent onsite and offsite areas. More specifically, the Existing District to the north of the Katella District would experience shadow effects from development within the Katella District. Similarly, the area north of the Pond District, which lies outside of the project area, could experience shade and shadow effects from development within the Pond District. Thus, the heights of proposed buildings within the project area will create shade and shadow impacts upon onsite uses as well. However, the effects from shade and shadow would be limited to specific areas within the MLUP and, therefore, not result in significant impacts outside the project area.

The estimated 13.3 million new square feet of development has the potential to add significant light and glare within the project area and upon surrounding uses. Light from parking facilities, retail/office uses, and other visitor-serving uses within the project site will add to the illumination of the area at night. Nighttime illumination of buildings, pedestrian walkways, parking areas, and roadways internal to the project area will be used to highlight building design features, emphasize prominent entrances and plazas, and create a feeling of security.

Light and glare minimization design features would be incorporated into the project to reduce potential impacts to a less than significant level. Such features include the use of non-reflective or low-reflective types of glazing, and the design and installation of outdoor lighting so that it is confined downward into the site. These features will serve to minimize the amount of light and glare onsite and upon surrounding uses. Therefore, light and glare impacts are not considered a significant impact.

Construction of the proposed project will create visual disruption within the project area. This includes installation and some removal of landscaping, grading, demolition of some existing structures, and other infrastructure and building construction. Construction impacts, while occurring over an extended period of time as properties develop in accordance with the MLUP, will be staged and of a scale relative to the entire project area such that no significant impacts will occur.

5.10.3 CUMULATIVE IMPACTS

The study area for cumulative effects to visual resources is a 0.5-mile border area around the project site. The study area is characterized by urban uses and does not contain any scenic resources or natural open space areas. Implementation of the MLUP will provide a more cohesive and visually appealing character to the project area. Moreover, development of the proposed project would not result in a change in the existing urban character of the area. Therefore, the proposed project would not contribute to a significant cumulative aesthetic impact.

5.10.4 MITIGATION MEASURES

No significant impacts would occur; therefore, no mitigation measures are required.

5.10.5 SIGNIFICANT UNAVOIDABLE IMPACTS

No significant unavoidable impacts would occur as a result of project development.

5.11 CULTURAL RESOURCES

A record search for the project site and surrounding area was prepared by the South Central Coastal Information Center Regional Archaeological Information Center at the UCLA Institute of Archaeology in November 1997. The search included a review of all recorded historic and prehistoric archaeological sites within the project area, as well as a review of all known cultural resource survey and excavation reports. In addition, historic maps of the area and several relevant cultural inventory lists were reviewed and summarized. The complete report is included in Appendix F of this draft EIR. The following discussion is based on the UCLA November 1997 report as well as the Anaheim Sports Center Draft EIR (MBA 1996) cultural resources analysis.

5.11.1 ENVIRONMENTAL CONDITIONS

Cultural resources include fossils, remains, and artifacts from prehistoric civilizations, historic structures, and other antiquities. A records search to identify cultural resources within a 1-mile radius of the project site included a review of all recorded historic and prehistoric archaeological sites within the project area and a review of all known cultural resource surveys and excavation reports. In addition, the search included a review of historic maps, the National Register of Historic Places, the California State Historic Resources Inventory, the listing of California Historical Landmarks, and the California Points of Historical Interest. The following provides a discussion of the findings from the record review.

Prehistoric Resources

Prehistoric resources include fossils, archaeologic and paleontologic remains, and early Native American artifacts. No prehistoric sites were identified within a 1-mile radius of the project site.

Historic Resources

Historic sites typically include European-style agricultural, rural, or urban development. Inspection of historic maps (Anaheim 1896 and 1942 15' series quadrangle) indicates that in 1896 the Santa Ana River, located adjacent to the eastern portion of the project site, was perennial and consisted of several braided channels flowing through a wash. The river was still unleveed at that time. Just west of the river within a 1-mile radius of the project area, a few buildings and several developed roads had been built. East of the river several buildings and an open street grid pattern had been constructed. According to the 1896 quadrangle, one bridge crossed the Santa Ana River. Both the Southern Pacific Railroad and the Atchison, Topeka, and Santa Fe Railroad passed within a 1-mile radius of the project area.

According to the 1942 quadrangle, the Santa Ana River had been leveed. An open street grid pattern and several buildings existed on either side of the river. In addition, a few more bridges extended over the

river. Ball Road, Katella Avenue, Chapman Avenue, Lewis Street, Placentia Avenue, and Main Street had all been labeled on the 1942 quadrangle. In addition, the existing Santa Ana Freeway (I-5) alignment was labeled U.S. Route 101 (U.S. 101) from the existing location of Anaheim Boulevard. U.S. 101 headed north through the City of Anaheim. By 1942, an additional branch of the Southern Pacific Railroad had been built, which connected the City of Anaheim with the branch of the Southern Pacific Railroad that was identified in the 1896 quadrangle located to the east and south of the site. The 1942 quadrangle also identified that the City of Orange had expanded within the 1-mile search radius of the project area. Numerous buildings and a dense street grid pattern were visible within the city. Power transmission lines had also been built throughout the 1-mile search radius of the project area.

Based upon a review of the National Register of Historic Places, the California State Historic Resources Inventory, the listing of California Historical Landmarks, and the California Points of Historical Interest, no properties were identified within a 1-mile radius of the project site.

Archaeological Resources

Based upon a review of all known cultural resource surveys and excavation reports, eleven surveys and/or excavations have been conducted within a 1-mile radius of the project site. Six of these are partially located within the project area. Additional investigations have been conducted on the Anaheim and Orange Quadrangles, but cannot be mapped due to insufficient locational information.

5.11.2 ENVIRONMENTAL IMPACTS

Thresholds of Significance

Under the provisions and guidelines of Appendix J, Section III, of CEQA, if a proposed "project may cause damage to an important archaeological resource, the project may have a significant effect on the environment." That is, before impacts or mitigation of impacts can be addressed, site importance must be determined. CEQA, Appendix J, recommends a testing program to determine if a site may qualify as an important resource under CEQA. The goals of a testing program are to determine if a subsurface component is present, whether the areal extent of surface and/or subsurface materials may be affected by the proposed action, and if the resources in question have the potential to answer local and regional research questions. If a resource is determined to be important, a program to mitigate anticipated impacts must be implemented through avoidance or data recovery. Sites found not to contain important cultural resources need not be addressed under CEQA.

Impacts on prehistoric resources are considered significant if a project may cause damage to an important prehistoric resource. Historical resources are considered to be significantly affected if a structure is or potentially is a designated historic resource.

Project Impacts

Past surveys have not uncovered any prehistoric, historic, or archaeological resources according to the archaeological records search; therefore, development of the project site is not expected to result in any direct impacts. However, development of specific projects within the project area may uncover prehistoric, historic, or archaeological resources. Therefore, potentially significant impacts on cultural resources could occur from the development of the MLUP.

5.11.3 CUMULATIVE IMPACTS

Because of the currently urban nature of the area, no known cultural resources are expected to occur on the project site or surrounding area, or at any of the related project sites. Therefore development of the project site, along with the related projects in the surrounding area, is not anticipated to contribute to a potential cumulative impact on cultural resources.

5.11.4 MITIGATION MEASURES

No impacts on cultural, historic, or prehistoric resources are anticipated; however, the following mitigation measures will be required for development within the project site to minimize potential disturbance to any as yet undiscovered resources that may be encountered during construction activity.

Mitigation Measure 11-1. Prior to approval of a grading plan, the property owner/developer shall submit a letter to the Public Works/Engineering Department, Development Division, and the Planning Department, Planning Division, identifying the certified archaeologist that has been hired to ensure that the following actions are implemented:

- a. The archaeologist must be present at the pregrading conference in order to establish procedures for temporarily halting or redirecting work to permit the sampling, identification, and evaluation of artifacts if potentially significant artifacts are uncovered. If artifacts are uncovered and determined to be significant, the archaeological observer shall determine appropriate actions in cooperation with the property owner/developer for exploration and/or salvage.
- b. Specimens that are collected prior to or during the grading process will be donated to an appropriate educational or research institution.
- c. Any archaeological work at the site shall be conducted under the direction of the certified archaeologist. If any artifacts are discovered during grading operations when the archaeological monitor is not present, grading shall be diverted around the area until the monitor can survey the area.

- d. A final report detailing the findings and disposition of the specimens shall be submitted to the City Engineer. Upon completion of the grading, the archaeologist shall notify the City to when the final report will be submitted.

Mitigation Measure 11-2. Prior to approval of a grading plan, the property owner/developer shall submit a letter to the Public Works/Engineering Department, Development Division, and the Planning Department, Planning Division, identifying the certified paleontologist that has been hired to ensure that the following actions are implemented:

- a. The paleontologist must be present at the pregrading conference in order to establish procedures to temporarily halt or redirect work to permit the sampling, identification, and evaluation of fossils if potentially significant paleontological resources are uncovered. If artifacts are uncovered and found to be significant, the paleontological observer shall determine appropriate actions in cooperation with the property owner/developer for exploration and/or salvage.
- b. Specimens that are collected prior to or during the grading process will be donated to an appropriate educational or research institution.
- c. Any paleontological work at the site shall be conducted under the direction of the certified paleontologist. If any fossils are discovered during grading operations when the paleontological monitor is not present, grading shall be diverted around the area until the monitor can survey the area.
- d. A final report detailing the findings and disposition of the specimens shall be submitted. Upon completion of the grading, the paleontologist shall notify the City as to when the final report will be submitted.

5.11.5 SIGNIFICANT UNAVOIDABLE ADVERSE IMPACTS

No known cultural resources have been identified in the study area; however, development of the MLUP may uncover such resources. Therefore, potentially significant impacts on these resources may occur. However, incorporation of the mitigation measures listed above will ensure potential indirect impacts of the project are mitigated to a less than significant level if any cultural resources are discovered during grading or development of the proposed project site.

SECTION 6

ALTERNATIVES TO THE PROPOSED PROJECT

Section 15126(d)(2) of the state CEQA Guidelines, as amended, mandates that an EIR includes a comparative evaluation of the proposed project with alternatives to the project, including the No Project. As described in Section 3, Project Description, the proposed project is the implementation of the MLUP. This section focuses on alternatives to the proposed project capable of avoiding or substantially lessening any significant adverse impact associated with the proposed project even if these alternatives would impede to some degree the attainment of project objectives or be more costly. Additionally, alternatives are discussed in the terms of achieving project objectives (see Section 3, Project Description, of this EIR).

The EIR has focused on the direct and indirect effects on the environment that will result from implementation of the proposed project. Direct environmental impacts of the project are expected related to air quality; noise; hydrology and water quality; public services, utilities (solid waste, water demand, etc.), and energy consumption. All direct impacts can be mitigated to a level that is considered less than significant with the exception of those associated with air quality, solid waste, and schools.

The project-alternatives evaluated in this section are the following:

- No Project Alternative
- No Project/No Development Alternative
- Lower-Intensity Development Alternative
- Higher-Intensity Development Alternative

The Environmentally Superior Alternative will be selected from among these alternatives and the proposed project. An alternative that is environmentally superior will result in the fewest or least significant environmental impacts and will achieve the objectives of the planning effort. Based on the evaluation of the four alternatives in this section, implementation of the Lower-Intensity Development Alternative would result in fewer significant impacts than the proposed project. While this alternative is determined to be environmentally superior than the proposed project, it would not meet the objectives of the proposed project at the scale at which it is planned.

The analysis of alternatives includes the assumption that all applicable mitigation measures associated with the project will be implemented with the appropriate alternatives. However, applicable mitigation measures may be scaled to reduce or avoid the potential impacts of the alternative under consideration, and may not precisely match those identified for the proposed project. If a specific

impact is not raised within the discussion of an alternative, it is because the impact is expected to be the same as that associated with the implementation of the proposed project.

A description of each alternative and a comparative environmental evaluation with the identified impacts of the MLUP project is provided below.

6.1 NO PROJECT ALTERNATIVE

6.1.1 DESCRIPTION

The No Project Alternative assumes that future development of the proposed project site would occur under the maximum buildout assumptions established in the City of Anaheim General Plan. General Plan Amendment No. 214 was adopted by the City to establish building intensities for the project area. The current General Plan Land Use designations for the site are Commercial, Recreation and Business, Office/Service/Industrial. The approximate 800-acre MLUP area currently contains approximately 10.5 msf of development and approved development (i.e., Sportstown District). Buildout under the General Plan would result in a total of 22,139,000 sf of development including: 2,964,000 sf of commercial uses; 16,378,000 sf of office uses; and 2,797,000 sf of industrial uses. In comparison, total buildout under the proposed Zoning Overlay would result in 13,261,173 sf of development, which is approximately 8.9 msf less than this alternative.

6.1.2 IMPACT EVALUATION

Land Use and Related Plans and Policies

No change to the General Plan designations would be required under this alternative. Development of the project area would continue to be guided by General Plan Amendment No. 214, which established a total building intensity for the project area of 22,139,000 sf. This represents an increase of approximately 8.9 msf above the proposed project. While this alternative represents a substantial increase in the intensity of land uses compared to the proposed project, no significant adverse impacts are anticipated based upon the environmental review prepared for the General Plan. However, the beneficial impacts associated with the proposed project, including, but not limited to, an enhanced visual quality of the MLUP area and linkage to the nearby Anaheim Resort and Disneyland Resort, would not occur under this alternative.

Transportation and Circulation

An analysis of the proposed project traffic impacts in relation to the buildout of the General Plan was prepared by Austin-Foust Associates (see Appendix C). According to their traffic study,

implementation of this alternative would improve the level of service at three intersections and worsen the level of service at two intersections compared to the proposed project. In addition, ADT levels would increase slightly along Orangewood Avenue and State College Boulevard south of Orangewood Avenue, and would decrease slightly along Katella Avenue and State College Boulevard north of Orangewood Avenue.

Air Quality

This alternative would result in an increase in short-term construction impacts proportionate to the increased land use intensity. Thus, during the buildout period of this alternative construction-related emissions from the development of an additional 11.7 msf would be incurred, versus the approximately 2.8 msf developed under the proposed project. In both cases, significant unavoidable impacts from PM10 emissions would occur, however the total amount of PM10 would be substantially greater under this alternative as a result of increased construction activity. Significant, unavoidable long-term regional air quality impacts from carbon monoxide (CO), nitrogen oxides (NO), and reactive organic compounds (ROC) would also be greater under this alternative compared to the proposed project.

Noise

Under the No-Project Alternative, noise from vehicle trips would increase in comparison to noise levels identified with the proposed project. The proposed increase in the amount of square footage allowed within the project area under General Plan Amendment No. 214 would incrementally increase the project-related traffic and, therefore will increase traffic noise. Neither noise levels from the proposed project nor this alternative would be significant. The mitigation measures, as identified for the proposed project, would be required from this alternative. Refer to Section 5.4, Noise, for a detailed discussion.

Earth Resources

Impacts associated with geology and soils would be comparable to those identified for the proposed project, including groundshaking and seismic activity. As with the proposed project, no significant impacts on earth resources are expected. However, mitigation measures comparable to those recommended for the proposed project would be incorporated into this alternative to minimize any impacts that might occur. Refer to Section 5.5, Earth Resources, for a detailed discussion.

Hydrology and Water Quality

Implementation of this alternative would have impacts similar to those identified for the proposed project. Although no significant hydrology and water quality impacts are expected, mitigation

measures similar to those identified for the proposed project would be incorporated into this alternative to minimize any impacts that may occur. Refer to Section 5.6, Hydrology and Water Quality, for a detailed discussion.

Employment, Population, and Housing

The substantially greater intensity of development which would occur under this alternative would result in proportionately greater increases in employment, population, and housing demand compared to the proposed project. Based on a prorated employment generation factor from SCAG, this alternative would result in a net increase of over 18,000 jobs at buildout. The proposed project is estimated to result in a net increase of approximately 5,320 jobs. In turn, the increased employment would result in proportionate increases in population and housing, relative to the proposed project. Thus, assuming twenty percent of the jobs created are for primary wage earners who relocate to Anaheim, approximately 3,600 new households would be added to the City of Anaheim versus 859 anticipated under the proposed project. These new households would result in an overall population increase of approximately 11,500 based on the City average of 3.195 persons per household. In comparison, the proposed project would result in approximately 2,745 new residents. Regardless, this alternative, similar to the proposed project, would not result in significant employment, population, and housing impacts.

Public Services, Utilities, and Energy Consumption

Under this alternative, the proposed increase in the amount of square footage allowed within the MLUP area under General Plan Amendment No. 214 would increase impacts on police and fire service. Schools would be affected indirectly as with the proposed project. Significant and indirect impacts to schools would be associated with this alternative. This alternative would also increase utility and energy consumption impacts, as with the proposed project. No significant adverse impacts on public services, utilities, and energy consumption would occur after mitigation, with the exception of impacts to schools and landfills. School and landfill impacts would be similar to that of the proposed project, although increased to reflect this alternative. Similar mitigation measures would be required to those of the proposed project resulting in reduced consumption and demand for public services, which would reduce impacts to a level of less than significant.

Hazardous Materials Compliance

Impacts would be similar to those associated with the proposed project regardless of the density and/or intensity of development activity. This is because the study area for hazardous materials is the same in which a search was conducted for potential and/or known hazardous contamination sites within a 0.25-mile radius of the project. Implementation of the mitigation measures identified for the proposed

project would be included in this alternative. Refer to Section 5.9, Hazardous Materials Compliance, for a detailed discussion.

Aesthetics

While implementation of this alternative would involve the development of uses similar to that of the proposed project, the substantial increase in land use intensity under this alternative would result in a aesthetic character which differs from the proposed project. Further, the comprehensive landscaping scheme envisioned under the proposed project would not occur as part of this alternative. As with the proposed project, short-term views would be impacted during construction, though these activities will be staged over approximately 20 years and would not result in significant effects. Given the increased density of development, greater impacts from shadows and shade are anticipated under this alternative. This alternative, as with the proposed project, is not expected to result in any significant aesthetic impacts. Refer to Section 5.10, Aesthetics, for a detailed discussion.

Cultural Resources

No significant impacts are anticipated from implementation of this alternative as no cultural resources have been found on the project site. Further, mitigation measures included in the proposed project would be incorporated into this alternative. Refer to Section 5.11, Cultural Resources, for a detailed discussion.

6.1.3 CONCLUSIONS

Implementation of this alternative would result in a substantially greater intensity of development compared to the proposed project. An additional 8.9 msf of development would be constructed under this alternative. The greater intensity of development would therefore result in a proportionate increase in impacts related to air quality, noise, public services and utilities, aesthetics, as well as population, employment, and housing. While no new significant impacts would be created from this alternative, the increased intensity of new development (approximately 11.7 msf versus 2.8 msf) would result in substantially greater environmental impacts overall, relative to the proposed project.

6.2 NO PROJECT/NO DEVELOPMENT ALTERNATIVE

6.2.1 DESCRIPTION

This alternative would essentially cease any new development within the project area. All uses currently in existence or under development would continue, and no substantial changes would occur. Thus, implementation of this alternative would maintain the approximate 10.5 msf of development

now in use or being developed (i.e., Sportstown District). These existing and/or approved uses consist of approximately: 5,084,627 sf of industrial uses; 2,632,327 sf of office; 755,608 sf of retail; 265,000 sf of hotel; and 1,700,000 sf currently under development in the Sportstown District.

6.2.2 IMPACT EVALUATION

Land Use and Related Plans and Policies

This alternative would result in no change to the current land uses in place at the project site. This includes a total of approximately 10.5 msf of development versus the total project buildout of approximately 13.3 msf anticipated from implementation of the proposed project. While this alternative would not directly conflict with the General Plan, many of the goals of the General Plan would not be met. Specifically, the goals of the Land Use Element, which include increasing sales tax revenue to enhance the economic base of the City and maintaining and enhancing the position of Anaheim as a nationally recognized tourist center, would not be met under this alternative. In addition, improvements anticipated by the Circulation Element may not be achieved under this alternative as the means to finance them (i.e., development impact fees) would be limited.

Transportation and Circulation

Implementation of this alternative would not result in any new traffic and would not affect intersections within the vicinity of the project site. By comparison, the development of the proposed project would incrementally add to the trips on surrounding intersection; however, the payment of traffic impact fees would provide the funding for improvements to these intersections. Since the No-Project/No-Development Alternative would not create any new traffic, this alternative would result in fewer impacts on surrounding intersections than the proposed project.

Air Quality

Implementation of the No-Project/No-Development Alternative would not result in any increase in short-term or long-term air emissions. This alternative would not increase dust (PM10) or other pollutants in the atmosphere. By comparison, air emissions during construction and operation of the project are anticipated to exceed SCAQMD thresholds of significance. This alternative would, therefore, result in fewer air quality impacts than would the proposed project.

Noise

The No-Project/No-Development Alternative would not result in any new construction of long-term noise. By comparison, the proposed project would generate construction onsite during grading; some

operations-related noise, and incrementally add long-term noise from increases in traffic. Since this alternative would not increase noise levels, it would result in fewer impacts than would the proposed project.

Earth Resources

Impacts associated with groundshaking and seismic activity would be comparable to those identified for the proposed project. As no new construction would occur, development in areas of unsuitable geologic conditions would not occur and no soil erosion would result. As with the proposed project, no significant impacts on earth resources are expected.

Hydrology and Water Quality

The No-Project/No-Development Alternative would not increase impervious surfaces on the project site; therefore, it would not increase surface water runoff. This alternative would also not affect existing surface water or groundwater quality. By comparison, the proposed project would increase surface water runoff and incrementally decrease the quality of surface water. However, this effect would not be significant. Groundwater quality would not be affected under the proposed project. Since this alternative would not affect surface water runoff or water quality, it would result in fewer impacts on hydrology and water quality than would the proposed project.

Employment, Population, and Housing

No additional employment would occur under this alternative as no new land uses would be developed that could generate jobs. In turn, no new demand for housing and no new population would result in the City of Anaheim.

Public Services, Utilities, and Energy Consumption

Implementation of the No-Project/No-Development Alternative would not increase demand for public services, utilities, and energy consumption since no new development would occur at the project site.

Hazardous Materials Compliance

Impacts would be equivalent to those associated with the proposed project because the study area for hazardous materials is the same in which a search was conducted for potential and/or known hazardous contamination sites within a 0.25-mile radius of the project, regardless of the density and/or intensity of development activity (refer to Section 5.9). As with the proposed project, compliance with existing federal, state, and local law would reduce potential impacts to less than significant levels.

Aesthetics

No new development would occur under this alternative, therefore no short-term visual impacts related to construction would occur and no long-term change from the baseline visual characteristics of the project area would occur. However, the comprehensive landscaping scheme envisioned by the proposed project would not be implemented under this alternative.

Cultural Resources

No potentially significant impacts are anticipated from implementation of this alternative because no construction activities would occur that may uncover any undiscovered cultural resources at the project site. No mitigation measures would be required as no excavation activities related to construction would occur under this alternative.

6.2.3 CONCLUSIONS

This alternative would avoid significant adverse impacts of the proposed project relating to air quality, noise, and public services and utilities. However, this alternative would not fulfill the goals of the General Plan, as discussed above under the land use section. Further, roadway improvements anticipated under the General Plan may not occur under this alternative resulting in indirect impacts to traffic and circulation. Similarly, the proposed project's comprehensive landscaping scheme would not be implemented under this alternative. Further, this alternative would not achieve, to any extent, the objectives of the proposed project as discussed in Section 3.3 of this document. However, this alternative is not considered feasible and is rejected from further consideration.

6.3 LOWER-INTENSITY DEVELOPMENT ALTERNATIVE

6.3.1 DESCRIPTION

This alternative would reduce the density of development allowed by the proposed project within each of the districts in the project site by 20 percent. This would reduce the total new development by approximately 0.6 msf to 2.24 msf. Buildout of the MLUP area would thus result in approximately 12.7 msf, versus the buildout level of 13.3 msf under the proposed project. Other aspects of the Lower-Intensity Development Alternative, including circulation improvements and design guidelines that facilitate a unified, civic-scaled public landscape, would remain similar to the proposed project. The general intent of this alternative is to reduce the overall impact of development at the site while creating a feasible alternative to the proposed project. The building intensities by district are listed below in Table 6-1.

**TABLE 6-1
REDUCED DENSITY DEVELOPMENT ALTERNATIVE
BUILDING INTENSITIES**

District	Total Existing and Approved (Sq. Ft.)	Allowable Increase (Sq. Ft.)	Buildout (Sq. Ft.)
Existing District	3,358,374	101,490	3,458,864
Gene Autry District	806,538	185,825	992,363
Arrowhead Pond District	1,101,215	475,312	1,576,527
Katella Corridor District	2,934,392	1,634,916	4,564,308
Gateway District	537,043	-157,543	694,586
Sportstown District	1,700,000		
Total	10,437,562	2,240,000	12,677,562
Sq. Ft.: Square Footage			
Source: Michael Brandman Associates, September 1998			

6.3.2 IMPACT EVALUATION

Land Use and Related Plans and Policies

Existing land use plans and policy impacts would be similar to those identified in the analysis of the proposed project. Mitigation measures identified for the proposed MLUP would be implemented under this alternative and would serve to reduce impacts on related plans and policies to a level that is less than significant. The Lower-Intensity Development Alternative would result in the development of land uses that are essentially identical to the proposed project. However, the intensity of development would be reduced by approximately 20 percent throughout each district in the project site.

Transportation and Circulation

The proposed project is not anticipated to result in any significant impacts on traffic and circulation in both the short-term (Year 2000) and long-term (2010). Similarly, the Lower-Intensity Development Alternative would not result in any significant impact; however, the effects on traffic and circulation would be less than the proposed project. While this alternative would have less impact, mitigation measures described for the proposed project would still apply, thus ensuring impacts would remain less than significant.

Air Quality

Implementation of this alternative would result in air quality impacts less than, but similar to those associated with the proposed project. As with the proposed project, short-term construction impacts from ROG and NO_x are anticipated. Similarly, long-term operational emissions associated with the project are anticipated to occur. Both the proposed project and this alternative would be consistent with the Air Quality Management Plan. Mitigation measures similar to the proposed project would be implemented under this alternative. While the emissions would decrease under this alternative, significant unavoidable air quality impact would occur under this alternative as well as the proposed project.

Noise

Under this alternative, noise from vehicle trips would be reduced in comparison to the proposed project. The reduction in the intensity of traffic generating land uses would incrementally reduce project related traffic, and thus traffic noise. However, as with the proposed project, long-term noise levels would not be significant. Mitigation measures similar to the proposed project would be applied to ensure short-term construction impacts remain less than significant. Refer to Section 5.4, Noise, for a detailed discussion.

Earth Resources

Impacts relating to geology and soils would be comparable to those identified for the proposed project, including seismic activity and potential liquefaction. Although no significant impacts to earth resources are expected, mitigation measures similar to those recommended for the proposed project would be applied in order to minimize any impacts that may occur. Please refer to Section 5.5, Earth Resources, for a detailed discussion.

Hydrology and Water Quality

Implementation of this alternative would result in similar impacts to those identified for the proposed project. Although no significant hydrology and water quality impacts are anticipated, mitigation measures similar to those identified for the proposed project would be incorporated into this alternative in order to minimize any impacts that may occur. Refer to Section 5.6, Hydrology and Water Quality, for a detailed discussion.

Employment, Population, and Housing

Implementation of this alternative would result in reduced socioeconomic impacts in direct proportion to the reduced building intensities that would occur. Specifically, the Lower-Intensity Development Alternative would result in approximately 4,784 new jobs. These new jobs would result in an induced demand for approximately 687 new housing units, and result in approximately 2,196 new residents. These numbers are approximately 20 percent lower than the proposed project, and thus would result in lower impacts associated with growth and housing supply. However, no significant impacts are anticipated from the proposed project.

Public Services, Utilities, and Energy Consumption

The reduced intensity of this alternative would result in reduced demand on police and fire services. Impact to schools would be indirectly reduced relative to the decreased employment generation. The Lower-Intensity Development Alternative would also reduce utility and energy consumption impacts. No significant adverse impacts on public services and utilities, and energy consumption would occur after mitigation, with the exception of impacts to schools and landfills. As with the proposed project, impacts to schools and landfills would be significant, through the overall impact would be decreased in proportion to the building intensity reduction. Similar mitigation measure would be required to those of the proposed project resulting in reduced consumption and demand for public services, which would reduce impacts to level of less than significant.

Hazardous Materials Compliance

Impacts would be equivalent to those associated with the proposed project as the study area for hazardous materials is the same area for which a search was conducted for potential and/or known hazardous contamination sites within a 0.25-radius of the project. The reduced intensity of development associated with this alternative would not reduce the impacts related to the proposed project. Implementation of the mitigation measures identified for the proposed project would be included in this alternative, thus ensuring impacts remain less than significant. Refer to Section 5.9, Hazardous Materials Compliance, for a detailed discussion.

Aesthetics

The Lower-Intensity Development Alternative would result in the development of the same types of urban uses associated with the proposed project, though modified to reflect the reduced scale of this alternative. Implementation would be guided by the same development standards, landscape, design, and setback standards as the proposed project. The reduced intensity of development would lessen the shade and shadow impacts associated with the proposed project. However, as with the proposed

project, no significant aesthetic impacts are anticipated. Refer to Section 5.10, Aesthetics, for a detailed discussion.

Cultural Resources

As with the proposed project, no potentially significant impacts are anticipated on cultural resources. Mitigation measures included in the proposed project would ensure that impacts remain less than significant. Refer to Section 5.11, Cultural Resources, for a detailed discussion.

6.3.3 CONCLUSIONS

Implementation of this alternative would result in impacts comparable to the proposed project in the following areas: land use and related plans and policies; hazardous materials; aesthetics; and cultural resources. A decrease in impacts would be anticipated in the following areas: transportation and circulation; air quality; noise; population, employment and housing; public services, utilities and energy consumption. However, this alternative would not avoid significant impacts associated with the proposed project relating to air quality, schools, and solid waste.

6.4 HIGHER-INTENSITY DEVELOPMENT ALTERNATIVE

6.4.1 DESCRIPTION

Implementation of the Higher-Intensity Development Alternative would increase the development density within the MLUP area by approximately 3 msf over the proposed project. Hence, buildout of the MLUP area under this alternative would thus result in approximately 16.3 msf, versus the buildout level of approximately 13.3 msf under the proposed project. Other aspects of the Higher-Intensity Development Alternative, including circulation improvements and design guidelines that facilitate a unified, civic-scaled public landscape, would remain similar to the proposed project. The building intensity by district is listed below in Table 6-2.

**TABLE 6-2
HIGHER-INTENSITY DEVELOPMENT ALTERNATIVE
BUILDING INTENSITIES**

District	Total Existing and Approved (Sq. Ft.)	Allowable Increase (Sq. Ft.)	Buildout (Sq. Ft.)
Existing District	3,358,374	-88,892	3,269,482
Gene Autry District	806,538	232,281	1,038,819
Arrowhead Pond District	1,101,215	848,422	949,637
Katella Corridor District	2,934,392	4,513,824	7,448,216

TABLE 6-2 (continued)

District	Total Existing and Approved (Sq. Ft.)	Allowable Increase (Sq. Ft.)	Buildout (Sq. Ft.)
Gateway District	537,043	372,272	909,315
Sportstown District	1,700,000	-----	1,700,000
Total	10,437,562	5,877,907	16,315,469
Sq. Ft. Square Footage			
Source: Spectrum Group, April 1998			

6.4.2 IMPACT EVALUATION

Land Use and Related Plans and Policies

As with the proposed project, a Zoning Overlay would be created which would facilitate the development of sports entertainment and office uses within the project area. However, this alternative would result in an increase of approximately 3 msf above what is anticipated under the proposed project. However, the total buildout intensity of approximately 16.3 msf for the MLUP area would result in impacts similar to those anticipated from the proposed project (refer to Section 5.1). Implementation of mitigation measures described in Section 5.1 would reduce any potential impacts to a less than significant level.

Transportation and Circulation

The increased building intensity resulting from implementation of this alternative would generate increased traffic levels. Unlike the proposed project, potentially significant impacts to the level of service (LOS) at the various intersections throughout the project site could occur. Mitigation measures similar and more extensive to the proposed project would be required.

Air Quality

This alternative would result in a increase in short-term construction impacts proportionate to the increased land use intensity. Similar to the proposed project, significant unavoidable impacts would occur, however the total emissions would be greater under this alternative, proportionate to the increase in construction activity. Significant, unavoidable long-term regional air quality impacts are anticipated to be greater under this alternative, due to the increased building intensity as well as the increased traffic generated from the additional development. As with the proposed project, significant unavoidable impacts would occur.

Noise

Short-term construction impacts would be similar to the proposed project. Implementation of the mitigation measures described in Section 5.4, Noise, would ensure that these impacts are less than significant. Long-term traffic noise under this alternative would be greater than the proposed project, but is not anticipated to result in a significant impact. Noise impacts from the rail line crossing the project site would also be similar to the proposed project, and would not affect any sensitive land uses, nor have a significant impact.

Earth Resources

Impacts associated with geology and soils would be comparable to those identified for the proposed project, including groundshaking and seismic activity. As with the proposed project, no significant impacts on earth resources are expected. However, mitigation measures comparable to those recommended for the proposed project would be incorporated into this alternative to minimize any impacts that might occur. Refer to Section 5.5, Earth Resources, for a detailed discussion.

Hydrology and Water Quality

Implementation of this alternative would have impacts similar to those identified for the proposed project. Although no significant hydrology and water quality impacts are expected, mitigation measures similar to those identified for the proposed project would be incorporated into this alternative to minimize any impacts that may occur. Refer to Section 5.6, Hydrology and Water Quality, for a detailed discussion.

Employment, Population, and Housing

Due to the greater intensity of uses, this alternative would generate a greater amount of employment opportunities than the proposed project. Based on SCAG employment generation factors, and utilizing a weighted average based on General Plan land use designations, this alternative would result in approximately 9,000 new jobs in the City of Anaheim. Assuming that 20 percent of these jobs would be primary wage earners that decide to relocate to the City, an increase in demand of housing of approximately 1,800 units would occur. This in turn would result in an increase of approximately 5,750 new residents in the City based upon the City average of 3.195 residents per household. For comparison purposes, the proposed project is anticipated to generate 5,320 new jobs, 1,251 new households, and 3,997 new residents. Similar to the proposed project, no significant employment, population, and housing impacts are expected to occur under this alternative.

Public Services, Utilities, and Energy Consumption

Under this alternative, the proposed increase in the amount of square footage within the MLUP area would increase impacts on police and fire service. Schools would be affected indirectly as with the proposed project. Significant and indirect impacts to schools would be associated with this alternative. This alternative would also increase utility and energy consumption impacts, proportionately higher than the proposed project. No significant adverse impacts on public services, utilities, and energy consumption would occur after mitigation, with the exception of impacts to schools and landfills. Impacts on schools and landfills would be similar to that of the proposed project, although increased to reflect this alternative. Similar mitigation measures would be required to those of the proposed project resulting in reduced consumption and demand for public services which would reduce impacts to a level of less than significant.

Hazardous Materials Compliance

Impacts would be equivalent to those associated with the proposed project regardless of the density and/or intensity of development activity, because the study area for hazardous materials is the same in which a search was conducted for potential and/or known hazardous contamination sites within a 0.25-mile radius of the project. Implementation of the mitigation measures identified for the proposed project would be included in this alternative. Refer to Section 5.9, Hazardous Materials Compliance, for a detailed discussion.

Aesthetics

While implementation of this alternative would involve the development of uses similar to that of the proposed project, the substantial increase in land use intensity would potentially result in greater impacts resulting from shade, shadow, and illumination. However, enhancements to the aesthetic character of the project area such as the comprehensive landscaping scheme included as part of the proposed project, would also occur under this alternative. As with the proposed project, short-term views would be impacted during construction, though these activities will be staged over approximately 20 years and would not result in significant effects.

Cultural Resources

Similar to the proposed project, potentially significant impacts are anticipated from implementation of this alternative. Further, mitigation measures included as part of the proposed project would be incorporated into this alternative. Refer to Section 5.11, Cultural Resources, for a detailed discussion.

6.4.3 CONCLUSIONS

The potential impacts to land use and related plans and policies; earth resources (i.e., geology, soils, and seismicity); hydrology and water quality; population, employment and housing opportunities; hazardous materials; aesthetics; and cultural resources would be comparable to the proposed project, while impacts to transportation/circulation; air quality; noise; and public services, utilities, and energy consumption would be greater than the proposed project.

6.5 ENVIRONMENTALLY SUPERIOR ALTERNATIVE

CEQA requires that an Environmentally Superior Alternative be identified; that is, an alternative that would result in the fewest or least significant environmental impacts. The No Project Alternative would induce impacts associated with development of the project site under the current General Plan designations for the site. Some environmental effects including, but not limited to, air quality, noise, and public services, utilities, and energy consumption could potentially be greater with the implementation of the No Project Alternative. Further, the No Project Alternative is not capable of satisfying the City's objectives.

Of the feasible alternatives, the Lower-Intensity Development Alternative would be the environmentally superior alternative among those analyzed. This alternative would have impacts similar to the proposed project with respect to land use and related plans and policies; earth resources; hydrology and water quality; hazardous materials; aesthetics; and cultural resources. Implementation of this alternative would also result in reduced impacts to transportation and circulation; air quality; noise; employment, population, and housing; and public services, utilities, and energy consumption. However, this alternative is not capable of eliminating any significant adverse effects associated with the project, nor will it reduce the level of significance of any of the identified environmental impacts, without incorporating the same mitigation measures that are proposed as part of the proposed project. Moreover, the objectives of the project would not be met by this alternative at the scale proposed.

SECTION 7

OTHER LONG-TERM CONSIDERATIONS

7.1 GROWTH-INDUCING IMPACTS

This section of the EIR analyzes the potential environmental consequences of the foreseeable growth and development in the surrounding area that would be caused by implementation of the proposed project.

To a great extent, the potential growth that may be induced by implementation of the proposed Anaheim Stadium Area MLUP is discussed under the "Cumulative Impact" sections within the individual environmental issue areas which are addressed in Section 5 of this EIR. Therefore, where appropriate, the following discussion summarizes the relevant analysis and provides cross-references to guide the reader to environmental analyses located elsewhere in the EIR.

As described below, implementation of the MLUP may induce growth of various kinds, including economic growth in the City of Anaheim, new construction and other jobs in the region, and population growth in the Southern California region.

It is anticipated that the project site and surrounding area will experience substantial economic growth in the future as a direct result of implementation of the MLUP and other projects in the area, such as the Anaheim Convention Center expansion, development of Disney's California Adventure and the Sportstown Anaheim project in addition to the implementation of the Anaheim Resort Specific Plan. The intent of the proposed MLUP is to provide comprehensive land use planning and zoning framework to guide the development process. It provides for new office, hotel, retail and industrial development in an approximate 550-acre area surrounding the existing stadium.

The growth that may occur in the foreseeable future (through 2010) in the area surrounding the proposed project is described in Section 4, General Description of Environmental Setting, of this EIR. Growth anticipated within the project area will be compatible with the types of land uses allowed in project area. Therefore, although the proposed project is anticipated to induce development of this site with new uses such as retail, office, and hotels, the growth would be in accordance with the growth projections for the area.

Development onsite would directly create a number of new employment opportunities in the City of Anaheim and the surrounding area. Construction jobs in Anaheim and throughout the region will be created as a direct result of the project. Jobs associated with the operation of the newly developed uses will also be created as the individual Districts develop. In addition, other jobs, in a wide variety of sectors of the local and regional economies would be indirectly induced as a result of project

implementation. The number of construction and other related jobs which would be generated by the project cannot be accurately calculated at this state of project development; however, influence of the proposed project on the job market is not expected to generate significant growth beyond the growth assumed in regional plans. Estimates of projected jobs created through development of the MLUP are included in Table 5.7-11, in Section 5.7, Employment, Population, and Housing.

As discussed in Section 5.7, Employment, Population, and Housing, of this EIR, considering both immigrating and intrarregional relocation, it is estimated that approximately 859 employees will seek housing in Anaheim as a result of implementation of the MLUP. These new households would comprise approximately 4 percent of the 2020 population increase forecast for the City.

The project could also indirectly induce effects on population elsewhere within the region. Therefore, the potential demand for public services and utilities that would be generated by this induced population growth would be within the forecasted growth and infrastructure improvements in local and regional plans, including public service plans to accommodate forecasted growth.

Further, jobs indirectly induced by the project would induce demand for additional housing units within the region. However, it is infeasible to calculate the size of households, wage earner status, and the choice of housing location of the employees that may be indirectly induced by the implementation of the proposed project. Because the proposed project and the potential growth that would be indirectly induced by implementation of the proposed project are within the local and regional growth forecasts as described in Section 5.1, Land Use and Related Planning Programs, and Section 5.7, Employment, Population, and Housing, of this EIR, it is anticipated that the indirect effects associated with the provision of housing would also be within these forecasts.

It is possible that certain aspects of the proposed project would remove barriers to growth for new uses or expansion of existing uses in the surrounding area. For example, implementation of the proposed project will provide for certain public infrastructure improvements that may provide capacity in excess of the current demand. The additional capacity may be provided to adequately serve the reasonably anticipated growth within the service or study areas, as discussed in Section 4, General Description of Environmental Setting, of this EIR.

The growth that may be induced by implementation of the proposed project is anticipated to be only a portion of the buildout of the project currently under consideration and/or review for the surrounding area and is in accordance with adopted growth projections for the region. Thus, analysis of the cumulative effects of the proposed project plus the development of the surrounding area substitutes the potential environmental impacts associated with the growth that may be induced by the proposed project. Rather than repeating the detailed analysis of cumulative impacts, the reader is referred to the

"Cumulative Impact" discussions found within the individual environmental issue areas analyzed in Section 5 of this EIR.

**7.2 IRREVERSIBLE AND IRRETRIEVABLE COMMITMENT OF RESOURCES
THAT WOULD BE INVOLVED IF THE PROPOSED ACTION IS IMPLEMENTED**

The environmental effects of the proposed project are discussed in Section 5 and summarized in Section 2, Executive Summary, of this EIR. Implementation of the proposed project would require the long-term commitment of natural resources and land, as discussed below.

Approval and implementation of actions related to the MLUP will result in an irretrievable commitment of nonrenewable resources such as energy supplies and other construction-related resources. These energy resource demands would be used for construction, heating and cooling of buildings, transportation of people and goods to and from the project site, heating and refrigeration for food preparation and water, as well as lighting and other associated energy needs.

As fossil fuels currently are the principal source of energy, it can be stated that implementation of the development project within the MLUP area will directly reduce existing supplies of fuels, including fuel oil, natural gas, and gasoline. It has been forecast that the proposed project would consume 4,459,935 kWh of electricity, 131,175 MBTU of natural gas annually, and additional vehicular fuel. This represents a long-term commitment to consumption of an essentially nonrenewable resource.

The implementation of the MLUP will require the commitment or destruction of other nonrenewable or slowly renewable resources. These resources include, but are not limited to, lumber and other forest products; sand and gravel; asphalt; petrochemical construction materials; steel; copper; lead and other metals, water, etc. An increased commitment of public maintenance services (waste disposal and treatment, etc.) will also occur.

SECTION 8

COMPILATION OF MITIGATION MEASURES

5.1 LAND USE AND RELATED PLANNING PROGRAMS

Mitigation Measure 1-1. The City will review final site plans for development within the MLUP for consistency with any adopted plan for the area.

5.2 TRANSPORTATION AND CIRCULATION

Mitigation Measure 2-1. Prior to the issuance of grading permits for each project development forecast to generate 100 or more peak hour trips, as determined by the City Traffic and Transportation Manager utilizing Anaheim Traffic Analysis Model Trip Generation Rates, the property owner/developer shall prepare a trip reduction plan for construction crew vehicles subject to the review and approval of the City Traffic and Transportation Manager, to reduce potential vehicle trips on the road and identify parking locations for construction employees and equipment.

Mitigation Measure 2-2. Prior to final building and zoning inspection and ongoing during project operation, the property owner/developer shall implement and administer a comprehensive Transportation Demand Management (TDM) program for all employees. Objectives of the TDM program shall be to increase ridesharing and use of alternative transportation modes by guests and provide a menu of commute alternatives for employees to reduce project-generated trips.

A menu of TDM program strategies and elements for both existing and future employee commute options include, but are not limited to, the following:

- Onsite Service. Onsite services, such as the food, retail, and other services be provided.
- Ridesharing. A computer listing of all employee members be developed for the purpose of providing a "matching" of employees with other employees who live in the same geographic areas and who could rideshare.
- Vanpooling. A computer listing of all employees for the purpose of matching numbers of employees who live in geographic proximity to one another and could comprise a vanpool or participate in the existing vanpool programs.
- Transit Pass. Southern California Rapid Transit District and Orange County Transportation Authority (including commute rail) passes be promoted through financial assistance and onsite sales to encourage employees to use the various transit and bus services from throughout the region.

- Commuter Bus. As commuter "express" bus service expands throughout the region, passes for use on these lines may be provided for employees who choose to use this service. Financial incentives for these employees could be provided.
- Shuttle Service. A computer listing of all employees living in proximity to the project be generated, and a local shuttle program offered to encourage employees to travel to work by means other than the automobile. Event shuttle service will be available for the guests.
- Bicycling. A bicycling program be developed to offer a bicycling alternative to employees. Secure bicycle racks, lockers, and showers be provided as part of this program. Maps of bicycle routes throughout the area be provided to inform potential bicyclists of these options. Bicycle lanes will be provided along the internal ring road.
- Rental Car Fleet. A private "fleet vehicle" program be developed to provide employees who travel to work by means other than an automobile with access to automobiles in case of emergency, medical appointments, etc. This service would help employees use alternative modes of transportation by ensuring that they would be able to have personal transportation in the event of special circumstances.
- Guaranteed Ride Home Program. A program to provide employees who rideshare, or use transit or other means of commuting to work, with a prearranged ride home in a taxi, rental car, shuttle, or other vehicle, in the event of emergencies during the work shift.
- Target Reduction of Longest Commute Trip. An incentives program for ridesharing and other alternative transportation modes to put highest priority on reduction of longest employee commute trips.
- Stagger shifts.
- Develop a "compressed work week" program, which provides for fewer work days but longer daily shifts as an option for employees.
- Explore the possibility of a "telecommuting" program that would link some employees via electronic means (e.g., computer with modem).
- Develop a parking management program that provides incentives to those who rideshare or use transit means other than single-occupant auto to travel to work.
- Access. Preferential access to high occupancy vehicles, shuttles, and guests for egress purposes may be provided.
- Financial Incentive for Ridesharing and/or Public Transit. (Currently, federal law provides tax-free status for up to \$60 per month per employee contributions to employees who vanpool or use public transit, including commuter rail and/or express bus pools.)
- Financial Incentive for Bicycling. Employees offered financial incentives for bicycling to work.

- Special "Premium" for the Participation and Promotion of Trip Reduction. Ticket/passes to special events, vacations, etc. offered to employees who recruit other employees for vanpool, carpool, or other trip reduction programs.
- Actively recruit prospective employees residing within a 30-minute commute shed.
- Design incentive program for carpooling and other alternative transportation modes to place highest priority on reduction of longest commute trips.

Mitigation Measure 2-3. Prior to final building and zoning inspections, the property owner/developer shall join and financially participate in a clean fuel shuttle program, if established; and, shall participate in the Anaheim Transportation Network/Transportation Management Association in conjunction with the ongoing operation of the project.

5.3 AIR QUALITY

Mitigation Measure 3-1. Depending on the level of construction conducted at any one time, NO_x emissions could exceed daily and quarterly threshold levels and mitigation is warranted to reduce these emissions to the extent reasonably feasible. Furthermore, ROG emissions released during the application of paints and coatings could also exceed daily criterion levels. Because painting would be carried out at various stages of project development, it is doubtful that quarterly ROG emission thresholds would be exceeded.) The following measures will reduce these emissions, however, the resultant value is expected to remain significant.

- a. All construction equipment shall be maintained in good operating condition so as to reduce operational emissions. The contractor will ensure that all construction equipment is being properly serviced and maintained.
- b. Prior to construction, the contractor will provide evidence that low emission mobile construction equipment will be utilized, or that their use was investigated and found to be infeasible for the project.
- c. The contractor shall utilize existing power sources (e.g., power poles) or clean-fuel generators rather than temporary power generators where feasible.

Mitigation Measure 3-2. While the analysis of construction impacts notes that PM₁₀ levels associated with equipment use and fugitive dust will not exceed the daily or quarterly criteria, the URBEMIS7 model bases its estimate of an area of 33.7635 acres per day and includes twice daily watering of both the construction site and unpaved haul roads. Furthermore, the model considers that vehicle speeds on unpaved surfaces do not exceed 15 mph. Based on these assumptions, PM₁₀ emissions are estimated at 140.2 pounds per day and will not exceed either the daily or quarterly criteria values. However, if daily grading were to exceed an area of approximately 36 acres, the 150 pounds per day criterion could be exceeded producing a potentially significant impact. Furthermore,

5.4 NOISE

Mitigation Measures 4-1. During demolition, grading, and construction, noise generated by construction shall be limited by the property owner/developer to 60 dBA along the property boundaries, before 7 a.m. and after 7 p.m., as governed by Chapter 6.7, Sound Pressure Levels, of the Anaheim Municipal Code.

Mitigation Measure 4-2. Limit the hours of operation of equipment that produces noise levels noticeably above general construction noise levels to the hours of 10 a.m. to 4 p.m.

Mitigation Measure 4-3. All internal combustion engines on all of the construction equipment shall be properly outfitted with well maintained muffler systems.

5.5 EARTH RESOURCES

Mitigation Measure 5-1. Prior to approval of a grading plan, the property owner/developer shall submit to the Public Works Department a site specific report in compliance with DMG Special Publication 117 “Guidelines for Evaluating and Mitigating Seismic Hazards in California.” The report shall be prepared by an engineering geologist and geotechnical engineer. All grading shall be in conformance with Title 17 of the City of Anaheim Municipal Code.

Mitigation Measure 5-2. Prior to the issuance of each building permit, the property owner/developer shall submit for review and approval, detailed foundation design information for the proposed buildings, prepared by a civil engineer, based on recommendations by a geotechnical engineer.

Mitigation Measure 5-3. Prior to the issuance of each foundation permit, the property owner/developer shall submit a report prepared by a geotechnical engineer for review and approval which shall investigate the subject foundation excavations.

Mitigation Measure 5-4. Prior to the issuance of each building permit, the property owner/developer shall submit plans showing that the proposed structure(s) has been analyzed for earthquake loading and designed according to the most recent seismic standards in the Uniform Building Code adopted by the City of Anaheim.

Mitigation Measure 5-5. Prior to final building inspection for any proposed hotel uses, the property owner/developer shall submit an earthquake emergency response plan to the City of Anaheim Planning Department for review and approval. The plan shall require posted notices in all hotel rooms on earthquake safety procedures and incorporate ongoing earthquake training for hotel staff.

Mitigation Measure 5-6. During grading activities, the property owner/developer shall implement standard practices from City Ordinance (Title 17) and policies.

5.6 HYDROLOGY AND WATER QUALITY

Mitigation Measures 6-1. Prior to the issuance of building permits, the property owner/developer shall submit a detailed drainage plan to the City of Anaheim Public Works Department and the Orange County Flood Control District for review and approval. This drainage plan shall be in conformance with the City's Master Plan of Drainage, Drainage District Map 27. The drainage plan shall demonstrate that runoff will effectively be conveyed to the surrounding offsite drainage system and runoff rates would not affect receiving drainage facilities. More specifically, the drainage plan shall examine the existing and the proposed conditions within the project limits and detail drainage deficiencies based upon the water elevations of the Santa Ana River in accordance with Drainage District Map 27. All drainage components shall be designed to the minimum requirements of the City and County.

Mitigation Measure 6-2. Prior to the issuance of a grading permit, the property owner/developer shall submit plans documenting that the design of all aboveground structures (with the exception of parking structures) shall be at least 3 feet higher than the 100-year flood zone, where applicable. All structures below this level shall be flood-proofed to prevent damage to property or harm to people.

Mitigation Measure 6-3. Prior to the issuance of building permits, the property owner/developer shall demonstrate project conformance with the City's Flood Hazard Reduction Ordinance No. 4136 (Chapter 17.28 of the Anaheim Municipal Code) to the City of Anaheim Public Works Department, which pertains to properties that lie within the "A99" Special Flood Hazard Zone (Anaheim Floodplain Overlay Zone).

Mitigation Measures 6-4. At least 90 days prior to the initiation of grading activities for projects greater than five acres, a NOI shall be filed with the RWQCB by the property owner/developer pursuant to state and federal NPDES requirements. As part of the NOI, a SWPPP shall be prepared. The property owner/developer shall also prepare and submit to RWQCB a Water Quality Management Plan (WQMP) in accordance with the City's municipal NPDES requirements and the Orange County Drainage Area Management Plan. The SWPPP, in conjunction with the WQMP, will describe the structural and nonstructural BMPs that will be implemented during construction (short-term) within the project area as well as BMPs for long-term operation of the project area. Long-term measures could include, but may not be limited to, street sweeping, trash collection, proper materials storage, designated wash areas connected to sanitary sewers, filter and grease traps, and clarifiers for surface parking areas.

5.8 PUBLIC SERVICES, UTILITIES, AND ENERGY CONSUMPTION

Mitigation Measure 8.1-1. Prior to approval of the Grading Plan, the property owner/developer shall submit an emergency fire access plan to the Fire Department for review and approval to ensure that service to the site is in accordance with Fire Department requirements.

Mitigation Measure 8.1-2. Prior to the issuance of each building permit, plans shall indicate that all buildings shall have fire sprinklers installed by the property owner/developer in accordance with the Anaheim Municipal Code. Said sprinklers shall be installed prior to each final building and zoning inspection.

Mitigation Measure 8.1-3. Prior to commencement of structured framing onsite, fire hydrants required shall be installed and charged by the property owner/developer, as required and approved by the Fire Department.

Mitigation Measure 8.1-4. Prior to the issuance of each building permit, the property owner/developer shall submit a Construction Fire Protection Plan, which shall include detailed design plans for accessibility of emergency fire equipment, fire hydrant location, and any other construction features required by the Fire Marshal. The property owner/developer shall be responsible for securing facilities acceptable to the Fire Department and hydrants shall be operational with require fire flow.

Mitigation Measure 8.1-5. Prior to approval of street improvement plans, the water supply system shall be designed by the property owner/developer to provide sufficient fire flow pressure and storage for the proposed land use and fire protection in accordance with Fire Department requirements.

Mitigation Measure 8.2-1. Prior to the approval of the final site plan and issuance of each building permit, the property owner/developer shall submit plans to the Police Department for review and approval for the purpose of incorporating safety measures in the project design including the concept of crime prevention through environmental design (i.e., building design, circulation, site planning, and lighting of parking structure and parking areas).

Mitigation Measure 8.2-2. Prior to the issuance of each building permit for a parking structure, the property owner/developer shall submit plans to the Police Department for review and approval indicating the provision of closed circuit monitoring and recording or other substitute security measures as may be approved by the Police Department. Said measures shall be implemented prior to final building and zoning inspections.

Mitigation Measure 8.2-3. Prior to the issuance of each building permit, the property owner/developer shall submit design plans that shall include parking lots and parking structures with controlled access

points to limit ingress and egress if determined to be necessary by the Police Department, and shall be subject to the reviews and approval of the Police Department.

Mitigation Measure 8.2-4. If the Anaheim Police Department or Anaheim Traffic Management Center (TMC) personnel are required to provide temporary traffic control services, the property owner/developer shall reimburse the City, on a fairshare basis, if applicable, for reasonable costs associated with such services.

Mitigation Measure 8.3-1. Prior to issuance of each building permit, the property owner/developer shall submit project plans to the Street and Sanitation Division of the Public Works Department for review and approval to ensure that the plans comply with AB 939, and the Solid Waste Reduction Act of 1989, and the County of Orange and City of Anaheim Integrated Waste Management Plans as administered by the City of Anaheim. Implementation of said plan shall commence upon occupancy and shall remain in full effect as required by the Street and Sanitation Division and may include, at its discretion, the following plan components:

- Detailing the locations and design of onsite recycling facilities.
- Providing onsite recycling receptacles to encourage recycling.
- Participating in the City of Anaheim's "Recycle Anaheim" program or other substitute program as may be developed by the City.
- Facilitating paper recycling by providing chutes or convenient locations for sorting and recycling bins.
- Facilitating cardboard recycling (especially in retail areas) by providing adequate space and centralized locations for collection and bailing.
- Facilitating glass recycling (especially from restaurants) by providing adequate space for sorting and storing.
- Providing trash compactors for nonrecyclable materials whenever feasible to reduce the total volume of solid waste and the number of trips required for collection.
- Providing on-site recycling receptacles accessible to the public to encourage recycling for all businesses, employees, and patrons where feasible.
- Prohibiting curbside pick-up.
- Ensuring hazardous materials disposal complies with federal, state, and city regulations.

Mitigation Measure 8.3-2. On-going during project operations, the following practices shall be implemented, as feasible, by the property owner/developer:

- Usage of recycled paper products for stationery, letterhead, and packaging.
- Recovery of materials, such as aluminum and cardboard.
- Collection of office paper for recycling.
- Collection of polystyrene (foam) cups for recycling.
- Collection of glass, plastics, kitchen grease, laser printer toner cartridges, oil, batteries, and scrap metal for recycling or recovery.

Mitigation Measure 8.3-3. Prior to issuance of a demolition permit, the property owner/developer shall submit a Demolition and Import/Export Plans, if determined to be necessary by the Public Works Department, Traffic Engineering Division and/or Street and Sanitation Division. The plans shall include identification of offsite locations for material export from the project and options for disposal of excess material. These options may include recycling of materials onsite, sale to a broker or contractor, sale to a project in the vicinity or transport to an environmentally cleared landfill, with attempts made to move it within Orange County. The property owner/developer shall offer recyclable building materials, such as asphalt or concrete for sale or removal by private firms or public agencies for use in construction of other projects, if all cannot be reused on the project site.

Mitigation Measure 8.5-1. Prior to issuance of each building permit, the property owner/developer shall provide proof to the Building Division of the Planning Department that school impact fees have been paid consistent with State statutes.

Mitigation Measure 8.6-1. Prior to the issuance of the final building permit, new Well No. 45 will be installed to replace the existing Well No. 33. This well will serve as a major source of supply for the proposed project. This new well will be installed near the intersection of Katella Avenue and the proposed project access from Katella Avenue. The well is expected to produce in the vicinity of 3,000 gallons per minute and will be approximately 1400 feet deep. In addition, the existing Well No. 33 will be removed.

Mitigation Measure 8.6-2. Prior to the issuance of the final building permit, a new 16-inch pipeline will be constructed in Katella Avenue from Well No. 45 to the existing 18-inch line at the intersection of Katella Avenue and State College Boulevard. This new pipeline will complete a loop with the sites proposed and surrounding system.

Mitigation Measure 8.6-3. Prior to the issuance of a building permit, a submitted landscape plan shall demonstrate compliance with the City of Anaheim adopted the Landscape Water Efficiency Guidelines. This ordinance is in compliance with the State of California Water Conservation in

Landscaping Act (AB 325). Among the measures to be implemented with the project are the following:

- Use of water-conserving landscape plant materials wherever feasible;
- Use of vacuums and other equipment to reduce the use of water for wash down of exterior areas;
- Low-flow fittings, fixtures and equipment including low flush toilets and urinals;
- Use of self-closing valves for drinking fountains;
- Use of efficient irrigation systems such as drip irrigation and automatic systems which use moisture sensors;
- Infrared sensors on sinks, toilets and urinals;
- Low-flow shower heads in hotels;
- Infrared sensors on drinking fountains;
- Use of irrigation systems primarily at night, when evaporation rates are lowest;
- Water-efficient ice machines, dishwashers, clothes washers, and other water using appliances;
- Cooling tower recirculating system;
- Use of low flow sprinkler heads in irrigation system;
- Use of waterway re-circulation systems;
- Provide information to the public in conspicuous places regarding water conservation; and
- Use of reclaimed water for irrigation and washdown when it becomes available.

In connection with submittal of landscape and building plans, the applicant shall identify which of these measures have been incorporated into the plans.

Mitigation Measure 8.6-4. Prior to issuance of the first building permit, the applicant will provide engineering studies, including network analysis, to size the water mains for ultimate development within the project. This includes detailed water usage analysis and building plans for Public Utilities Water Engineering review and approval in determining project water requirements and appropriate water assessment fees.

Mitigation Measure 8.7-1. Prior to occupancy of an area located within the Arrowhead Pond District between the Southern Pacific Railroad right-of-way to the north, the Pond to the south, Pond Parking to the east, and Douglass Road to the west, a 12-inch replacement sewer in Douglass Road from Katella Avenue to this area will need to be constructed.

Mitigation Measure 8.7-2. The property owner/developer shall pay their fair share towards construction of a sewer line in Katella Avenue that will flow from a point between I-5 and State College Boulevard to intersect with the County's trunk line in State College Boulevard.

Mitigation Measure 8.8-1. Prior to the development of the project area contained within the 100-year floodplain, a detailed flood study should be performed and the proposed building should be elevated above the 100-year floodplain.

Mitigation Measure 8.8-2. Prior to the issuance of any building permits, a detailed drainage analysis will be required to determine if any project design features (construction of landscape berms or other barriers) will retard or take storm runoff outside the limits of the public right-of-ways. Measures will be required to avoid any flooding effects on downstream properties. Applicable storm drain improvements will be required per the SCAMPD and the revised Drainage District 27 Master Plan of Drainage.

Mitigation Measure 8.8-3. The property owner/developer shall apply for a National Pollution Discharge Elimination System construction permit. This permit would require the preparation of a Storm Water Pollution Prevention Plan to mitigate the erosion that may occur from storm water runoff during construction periods.

Mitigation Measure 8.9-1. Prior to issuance of each building permit, the property owner/developer shall submit plans showing that each structure will comply with the State Energy Efficiency Standards for Nonresidential Buildings (Title 24, Part 6, Article 2, California Code of Regulations) and will consult with the City of Anaheim Public Utilities Resource Efficiency Division in order to review above Title 24 measures prior to each final building and zoning inspection to incorporate into the project design including energy efficient designs. This consultation shall take place during project design to incorporate into the project design energy efficiency and allow potential systems alternatives such as thermal energy storage air-conditioning and building envelope options.

Mitigation Measure 8.9-2. In order to conserve energy, prior to issuance of each building permit, the property owner/developer shall implement energy-saving practices in compliance with Title 10, which may include the following:

- High-efficiency air-conditions with EMS (computer) control.
- Variable Air Volume (VAV) air distribution.

- Outside air (100 percent) economizer cycle.
- Staged compressors or variable speed drives to flow varying thermal loads.
- Isolated HVAC zone control by floors/separable activity areas.
- Specification of premium-efficiency electric motors (i.e., compressor motors, air-handling units, and fan-coil units).
- Use of occupancy sensors in appropriate spaces.
- Use of compact fluorescent lamps in place of incandescent lamps.
- Use of T-8 lamps and electronic ballasts where applications of standard fluorescent fixtures are identified.
- Use of metal-halide or high-pressure sodium (high intensity discharge) lamps for outdoor lighting and parking lots.
- Consideration of thermal energy storage air conditioning for hotel buildings, meeting facilities, theaters, or other intermittent-use spaces or facilities that may require air-conditioning during summer, day-peak periods.
- Consideration for participation in Resource Efficiency's Programs such as:
 - New Construction Design Review, in which the City cost-shares engineering fees for design of energy efficient buildings and systems.
 - Energy Sale for New Construction - Cash incentives (\$150 to \$400 per kW reduction in load) for efficiency that exceeds Title 24 requirements.
 - Thermal Energy Storage Feasibility Study - Cost sharing of up to \$5,000 for the feasibility study of TES applied to new facilities.

Mitigation Measure 8.9-3. Prior to issuance of each building permit for any buildings requiring a change in electrical service, the property owner/developer shall install an underground electrical service from the Public Utilities Distribution System. The Underground Service will be installed in accordance with the Electric Rules, Rates, Regulations and Electrical Specifications for Underground Systems. Electrical Service Fees and other applicable fees will be assessed in accordance with the Electric Rules, Rates, Regulations and Electrical Specifications for Underground Systems.

Mitigation Measure 8.10-1. Prior to the issuance of each building permit, the property owner/developer shall submit plans for review and approval which shall ensure that buildings are in conformance with the State Energy Conservation Standards for Nonresidential Buildings (Title 24, Part 6, Article 2, California Administrative Code).

Mitigation Measure 8.11-1. If deemed necessary, within 6 months after completion of building exteriors of new developments over 75 feet in height, a study of area television reception shall be undertaken by the property owner/developer and submitted to the City Engineer for review and approval. If the City of Anaheim determines that the proposed project creates a significant impact on broadcast television reception at local residences and other existing hotels/restaurants or other businesses, a signal booster or relay system shall be installed by the property owner/developer immediately on the roof of the tallest project building to restore television reception to its original condition.

5.9 HAZARDOUS MATERIALS COMPLIANCE

Mitigation Measure 9-1. Ongoing during demolition and construction, in the event that hazardous waste is discovered during site preparation or construction, the property owner/developer shall ensure that the identified hazardous waste and/or hazardous material is handled and disposed of in the manner specified by the State of California Hazardous Substances Control Law (Health and Safety Code, Division 20, Chapter 6.5) and according to the requirements of the California Administrative Code, Title 30, Chapter 22.

Mitigation Measure 9-2. The applicant shall handle and dispose of all hazardous materials and wastes during the operation and maintenance of facilities in accordance with the state codes identified in Mitigation Measure No. 2 above.

5.11 CULTURAL RESOURCES

Mitigation Measure 11-1. Prior to approval of a grading plan, the property owner/developer shall submit a letter to the Public Works/Engineering Department, Development Division, and the Planning Department, Planning Division, identifying the certified archaeologist that has been hired to ensure that the following actions are implemented:

- a. The archaeologist must be present at the pregrading conference in order to establish procedures for temporarily halting or redirecting work to permit the sampling, identification, and evaluation of artifacts if potentially significant artifacts are uncovered. If artifacts are uncovered and determined to be significant, the archaeological observer shall determine appropriate actions in cooperation with the property owner/developer for exploration and/or salvage.
- b. Specimens that are collected prior to or during the grading process will be donated to an appropriate educational or research institution.
- c. Any archaeological work at the site shall be conducted under the direction of the certified archaeologist. If any artifacts are discovered during grading operations when the archaeological monitor is not present, grading shall be diverted around the area until the monitor can survey the area.

- d. A final report detailing the findings and disposition of the specimens shall be submitted to the City Engineer. Upon completion of the grading, the archaeologist shall notify the City to when the final report will be submitted.

Mitigation Measure 11-2. Prior to approval of a grading plan, the property owner/developer shall submit a letter to the Public Works/Engineering Department, Development Division, and the Planning Department, Planning Division, identifying the certified paleontologist that has been hired to ensure that the following actions are implemented:

- a. The paleontologist must be present at the pregrading conference in order to establish procedures to temporarily halt or redirect work to permit the sampling, identification, and evaluation of fossils if potentially significant paleontological resources are uncovered. If artifacts are uncovered and found to be significant, the paleontological observer shall determine appropriate actions in cooperation with the property owner/developer for exploration and/or salvage.
- b. Specimens that are collected prior to or during the grading process will be donated to an appropriate educational or research institution.
- c. Any paleontological work at the site shall be conducted under the direction of the certified paleontologist. If any fossils are discovered during grading operations when the paleontological monitor is not present, grading shall be diverted around the area until the monitor can survey the area.
- d. A final report detailing the findings and disposition of the specimens shall be submitted. Upon completion of the grading, the paleontologist shall notify the City as to when the final report will be submitted.

SECTION 9
ORGANIZATIONS AND PERSONS CONSULTED

9.1 CITY OF ANAHEIM

Fire Department	Gary Wilder
Parks, Recreation, and Community Services	Richard Mayer
Planning Department, Planning Division	Greg McCafferty
Police Department	Sergeant Chris Sayers

9.2 OTHER AGENCIES

Anaheim City School District	Sergio San Martin
Anaheim Unified High School District	Jean Hockett
California Archaeological Information Center	Chris Heng
California Department of Transportation	Aileen Kennedy
	Robert Joseph
California Employment Development Department	Linda Reed
	Spencer Wong
California Regional Water Quality Control Board	Scott Dawson
City of Garden Grove	Mel Lee
Local Agency Formation Commission	J. Crosthwaite
Orange County Integrated Waste Management Department	Kevin Kondru
Orange County Planning and Development Services Department	George Britton
Orange County Sanitation Districts	David Ludwin
Orange County Transportation Authority	Pamela Galera
Southern California Association of Governments	Viviane Doche-Boulos
Transportation Corridor Agencies	Macie Cleary-Milan

9.3 PRIVATE ORGANIZATIONS

Century Communications Corporation	Todd Brickner
Orange County Bicycle Coalition	Don Harvey
Pacific Bell Telephone Company	Chris Brown
Southern California Gas Company	Robert Warth

SECTION 11
BIBLIOGRAPHY

The documents which are specifically incorporated by reference are available for public review at the City of Anaheim Planning Department, 200 South Anaheim Boulevard, Anaheim, California, 92805. Other documents that served as secondary resource material for this EIR are made available by request to the City of Anaheim Planning Department.

The EIR appendices are available for public review at Anaheim public libraries and are available for review and/or purchase at the City of Anaheim Planning Department during the period of public review of the draft EIR.

Anaheim, City of. 1978. Noise Element of the General Plan.

Anaheim, City of. 1984. City of Anaheim General Plan.

Anaheim, City of. 1986 (June). Draft EIR No. 214, Anaheim Stadium Business Center Proposed General Plan Amendment.

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Cabot, Cabot & Forbes/RAMCO Partnership. 1983 (Feb). Final EIR No. 252, Anaheim Stadium Center, Orangewood Site Master Plan.

California Governor's Office, Office of Planning and Research. 1992. California Environmental Quality Act and Guidelines to the California Environmental Quality Act.

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Michael Brandman Associates. 1996 (Jan). Anaheim Sports Center Draft EIR No. 320.

Orange County Transportation Authority. 1997 (June). OCTA MIS Final Evaluation Report.

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TECHNICAL APPENDICES

APPENDIX A

Notice of Preparation and Correspondence

**NOTICE OF PREPARATION
ENVIRONMENTAL IMPACT REPORT NO. 321
ANAHEIM STADIUM AREA MASTER LAND USE PLAN
NOVEMBER 1996**

The City of Anaheim will be the lead agency and will prepare an Environmental Impact Report (EIR) for the Anaheim Stadium Area Master Land Use Plan (MLUP) (the "Project"). Comments from interested agencies are requested as to the scope and content of the environmental information which is pertinent to each agency's statutory responsibilities in connection with the proposed Project.

The Project area encompasses approximately 640 acres, and is located in the south-central portion of the City of Anaheim in north central Orange County. The project area is located generally west of the Santa Ana River and the SR-57 (Orange Freeway), south of the Southern California Edison easement and Cerritos Avenue, east of the I-5 (Santa Ana Freeway), and north of Chapman Avenue.

Existing land uses within and surrounding the Project area include Anaheim Stadium, Arrowhead Pond of Anaheim, Amtrak/Metrolink station, and a mix of light industrial, office, retail, and service establishments.

The proposed Project includes the preparation of a MLUP and Master EIR (MEIR) for the development of the area surrounding, but not including, the Anaheim Stadium property. The Project will include the completion of planning documents that will guide development of the greater Stadium Area through detailed zoning and development standards and design guidelines. The MLUP will also include a master landscape plan, streetscape program, identity program, and public facilities plan. Apart from the streetscape and identity programs, and certain public improvements, the MLUP will not provide for any specific development projects; rather it is intended to provide a range of land uses and development intensity for future development proposals through a comprehensive land use plan.

The environmental issues to be addressed in the EIR will include, but not be limited to, the following:

Aesthetics/Visual Resources	Population, Employment & Housing
Air Quality	Hydrology/Water Quality
Earth Resources-Geology	Land Use
Soil & Seismicity	Noise
Hazardous Material Compliance	Public Services
Transportation/Circulation	Public Utilities/Energy Consumption
Cultural Resources	Growth Inducing & Cumulative Impacts

**NOTICE OF PREPARATION
ENVIRONMENTAL IMPACT REPORT NO. 321
ANAHEIM STADIUM AREA MASTER LAND USE PLAN
NOVEMBER 1996**

In accordance with the time limits mandated by State Law, please send your response at the earliest possible date, but no later than 30 days after receipt of this notice, to:

Mr. Greg McCafferty, Associate Planner
City of Anaheim Planning Department
200 South Anaheim Boulevard #162
Anaheim, CA 92805

The City will conduct a public scoping meeting as part of the environmental review process. Scoping is useful in identifying potential environmental issues to be analyzed in the MEIR. It should be noted that this is an optional process and is conducted to receive public input, not to consider the merits of the proposal. The decision-making process will commence following completion of the MEIR.

ALL INTERESTED PARTIES ARE INVITED TO ATTEND A PUBLIC SCOPING MEETING TO ASSIST IN IDENTIFYING ISSUES TO BE ADDRESSED IN THE EIR. ATTENDEES WILL HAVE AN OPPORTUNITY TO PROVIDE INPUT TO THE CONSULTANTS PREPARING THE EIR.

The public scoping meeting will be held on:

**November 26, 1996 at 6:00 p.m.
City of Anaheim
City Council Chamber
200 South Anaheim Boulevard
Anaheim, California**

Thank you for your prompt response. If you have any questions, please contact Greg McCafferty at (714) 254-5139, extension 5743.

ANAHEIM STADIUM AREA MASTER LAND USE PLAN

INTRODUCTION

The City of Anaheim ("City") is the Lead Agency responsible for preparing a MEIR for the actions related to implementation of the proposed Anaheim Stadium Area MLUP (the "Project"). The Project encompasses approximately 640 acres, and is located within the south-central portion of the City. The project site surrounds the 167-acre Sportstown Anaheim site encompassing the existing Anaheim Stadium site and outlying parcels at the southeast corner of Katella Avenue and State College Boulevard. A separate EIR (No. 320) was prepared for Sportstown Anaheim and was certified by the City Council on July 9, 1996.

In order to further implement the economic development and enhancement goals with regard to the greater Stadium Area, the Anaheim City Council on January 9, 1996, directed City staff to prepare a MLUP and MEIR. The Anaheim Stadium Area MLUP addresses the 640 acres within the greater Anaheim Stadium Area surrounding the area addressed by the Sportstown Anaheim EIR. This study effort will result in the completion of planning documents that will guide future development through detailed zoning and development standards, design guidelines, master landscape plan, streetscape program, identity program and public facilities plan. The MLUP will also identify distinct linkages between Sportstown Anaheim, Arrowhead Pond of Anaheim, and the Anaheim Resort area including the Anaheim Convention Center and the Disneyland Resort. A list of potential discretionary actions is provided later in this document.

This Notice of Preparation (NOP) includes a project description that identifies probable environmental effects and describes the actions required for Project approval. This NOP is being distributed to all responsible agencies, trustee agencies, and interested parties as required by the California Environmental Quality Act (CEQA).

EXISTING CONDITIONS

The Project area is already developed and consists of Amtrak/Metrolink facilities, the Arrowhead Pond of Anaheim and a mix of office, light industrial and service uses. The Project is located within the Anaheim Stadium Area and is designated as Business Office/Service/Industrial on the Anaheim General Plan Land Use Map. A portion of the Project area located adjacent to I-5 is also located in the Anaheim Commercial/Industrial Redevelopment Project. Surrounding land uses include commercial recreation, and a mix of office, service, retail and industrial uses. Regional access to the site is provided from SR-57 and I-5. Local access to the Project area is from State College Boulevard, Orangewood Avenue, Katella Avenue, Anaheim Boulevard and Cerritos Avenue.

In response to emerging market trends and the City's desire to examine land use opportunities in the greater Stadium Area, the Anaheim City Council directed staff to prepare the MLUP and MEIR. A number of factors including the success of the Arrowhead Pond of Anaheim which has attracted new fans and visitors to the area, has provided the City with an opportunity to explore land uses that would be complementary to both the Arena and the Stadium. In addition, ongoing efforts in the nearby Anaheim Resort coupled with the planned Disneyland Resort and Convention Center expansions provide the opportunity to examine linkages between these areas. The City of Anaheim has proposed the Anaheim Stadium Area MLUP and the recently approved Sportstown Anaheim as a means to facilitate the economic development and enhancement goals of the City for the greater Stadium Area by providing additional land use opportunities and sports/entertainment venues to meet the recreational, service and commercial needs of residents, fans, visitors, and local business community.

A planning process is currently underway to determine the appropriate concept and program for the Anaheim Stadium Area MLUP. Because the program is ongoing, it is not possible to precisely define the proposed project at this time. The environmental process, which is being conducted in connection with the planning process, will enable the Project to be developed with the objective of impact avoidance to the maximum extent feasible. A framework for the proposed Project is described in this NOP; however, changes may occur during the planning process. Changes in the proposed Project will be clearly noted in the draft EIR and assessed accordingly.

DESCRIPTION OF THE PROJECT

Project Location

As shown on Exhibit 1, the Project is located within Anaheim in central Orange County. The site occupies approximately 640 acres and is located generally west of the Santa Ana River and SR-57, south of the Southern California Edison easement and Cerritos Avenue, east of I-5, and 1000 feet south of Orangewood Avenue. Exhibit 2 depicts the project's specific location within the Anaheim Stadium Area.

Project Characteristics

The proposed Project will identify subareas or districts and establish land uses and zoning and development standards and design guidelines for each district as well as maximum development intensities. The Project will also identify circulation and design linkages between Sportstown Anaheim and the Anaheim Resort (including the Convention Center and Disneyland Resort). Vehicular and pedestrian circulation patterns will be analyzed and a master landscape plan, streetscape program, identity program, and public facilities plan will be developed, including the creation of comprehensive landscape and graphic design elements for both public and private spaces. Exhibit 3 outlines the general estimated square footage for the proposed MLUP. Please note these are estimates and that the precise amount of square footage will be refined during preparation of the MLUP and draft EIR.

Although specific development projects have not been identified as part of the MLUP, the maximum square footage for each land use category would allow for any array of onsite uses. These may include retail (clothing stores, bookstores, specialty sporting goods, galleries), entertainment (movie theaters, live theaters, comedy clubs), restaurants (food court, sports bars and night clubs, coffee houses), sports-oriented businesses, office, hotels, banking, and other professional services. A comprehensive list of uses for each land use category will be developed as part of the MLUP.

Discretionary Action

The City anticipates that the Project will require a number of discretionary actions. These actions may include but are not limited to: amendment to the General Plan, zoning reclassifications and related land use approvals which may include conditional use permits, variances, final site plans, and subdivision maps. Further, the Project may also require the following approvals by the City of Anaheim: financing mechanisms, agreements, demolition permits, grading permits, building permits, encroachment permits, property acquisition, implementation of the Anaheim Commercial/Industrial Redevelopment Project including agreements and improvements, and other actions related to implementation of the Project.

PURPOSE OF THE EIR

The MEIR is being prepared by the City of Anaheim to assess the potential environmental impacts that may arise in connection with the future implementation of the Anaheim Stadium Area MLUP. In light of the range of actions and approvals that will be associated with future implementation of the Anaheim Stadium Area MLUP, the EIR is considered an MEIR as that term is defined in Section 21157 of the State CEQA Statutes. The EIR is also considered a project EIR for planned public improvements.



LEGEND



Project Location



3.0 1.5 0 3.0
SCALE IN MILES

exhibit 1

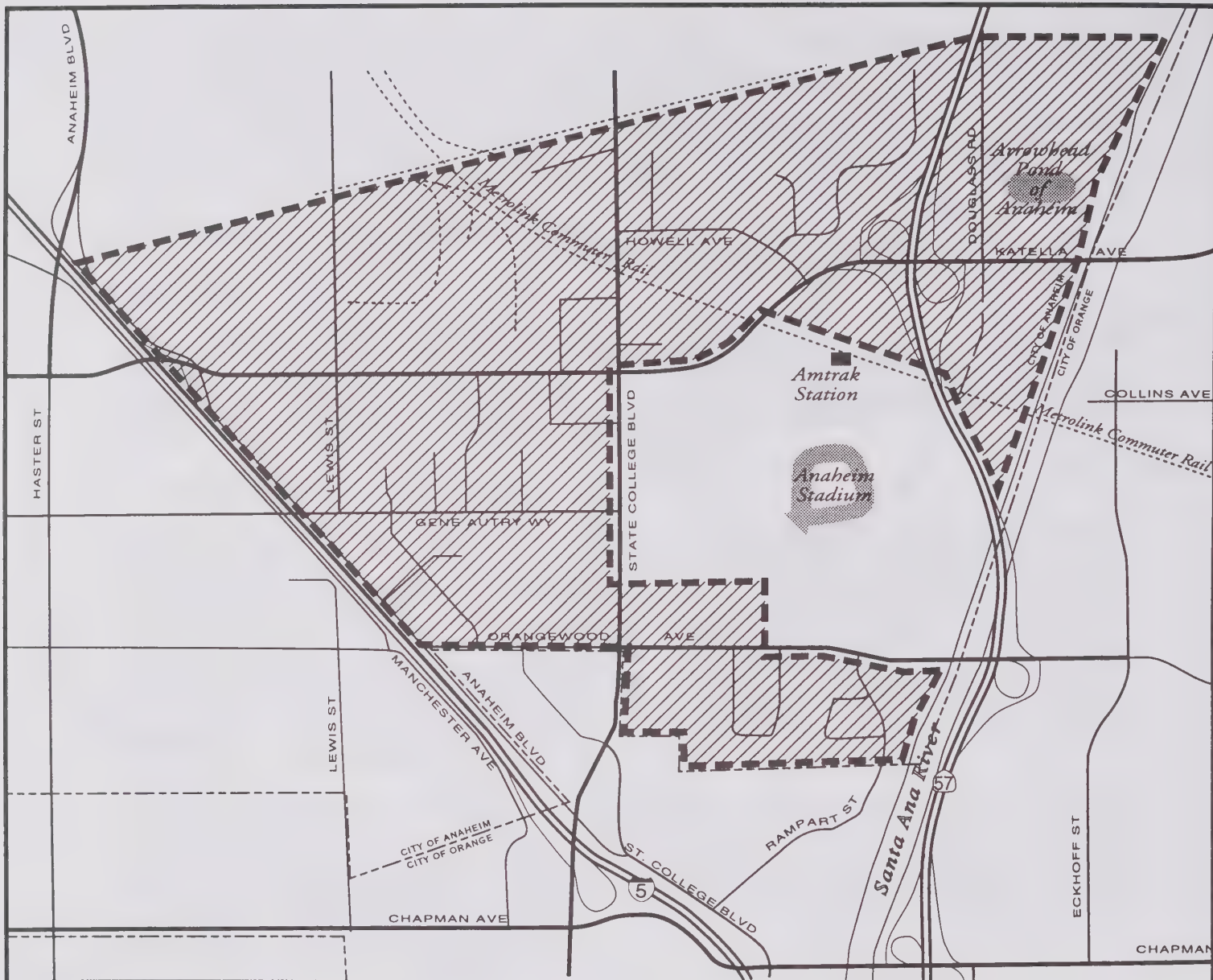
Regional Location Map

ANAHEIM STADIUM AREA MASTER LAND USE PLAN EIR



Michael Brandman Associates

19870002 • 9/96



LEGEND



Project Site Location



NORTH

2000' 1000' 0' 2000'

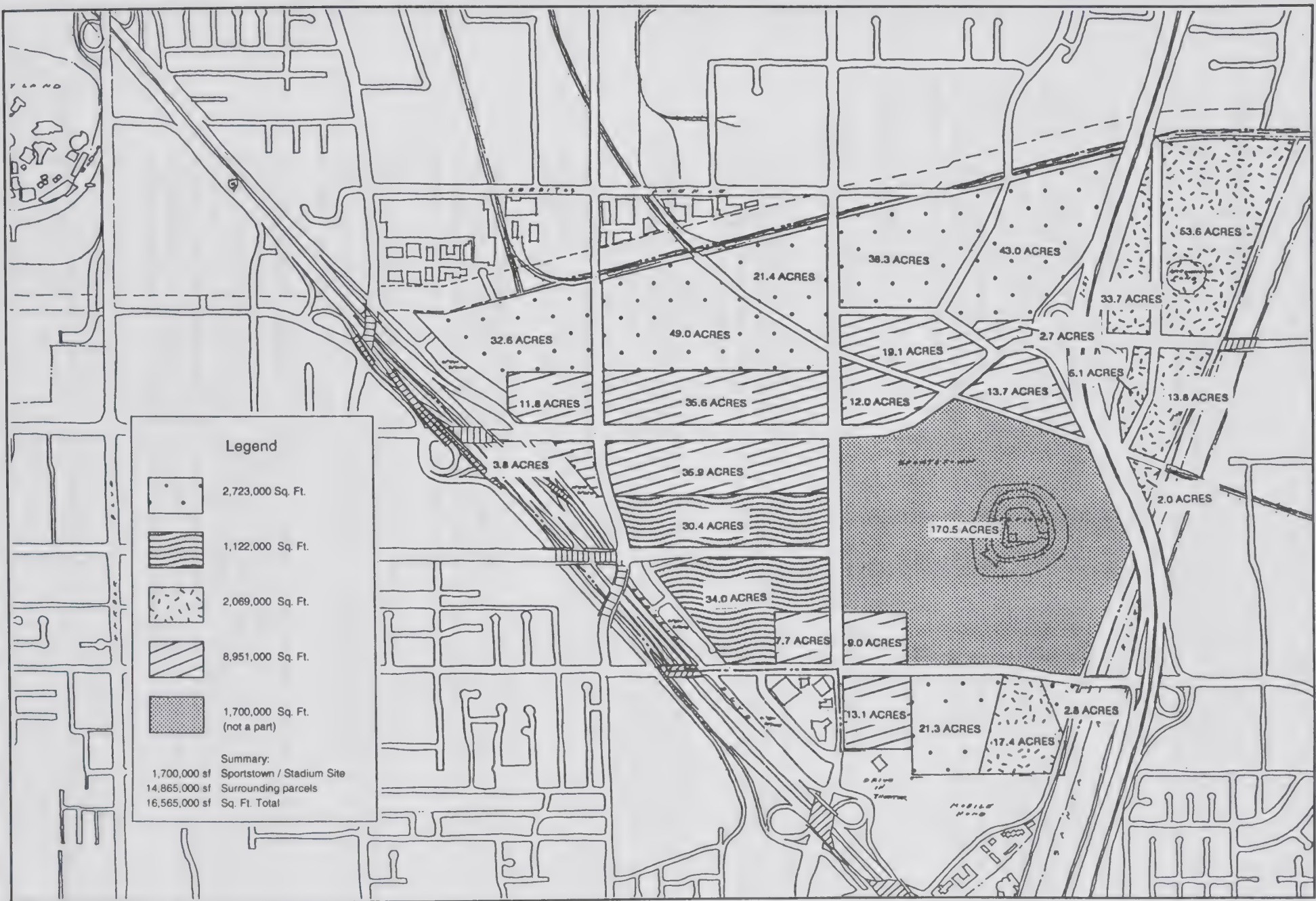


Michael Brandman Associates

19870002 • 9/96

exhibit 2
Project Vicinity Map

ANAHEIM STADIUM AREA MASTER LAND USE PLAN EIR



Michael Brandman Associates



NORTH

1600 800 0 1600 feet

19870002 • 9/96

exhibit 3

Density Distribution

ANAHEIM STADIUM AREA MASTER LAND USE PLAN EIR

PROJECT ALTERNATIVES

In addition to evaluating the potential environmental effects of the Project, the EIR will address a full range of project alternatives including, but not limited to, alternative land uses, and the "no-project" alternative as required by CEQA.

CUMULATIVE IMPACTS

Section 15130 of the CEQA Guidelines require the consideration of cumulative impacts in the EIR. Cumulative impacts are defined as two or more individual effects which, when considered together, are considerable, or which compound or increase other environmental effects. The individual effects may be changes resulting from a single Project or a number of separate projects. As part of this Project, the MEIR will identify which projects may contribute to cumulative impacts. More specifically, the MEIR will evaluate the change in the environment which may result from the cumulative impact of the Project when considered together with other closely related projects in the greater Stadium area.

RELEVANT PLANNING PROGRAMS

Planning programs which are relevant to the Project area, but are not proposed as part of the Anaheim Stadium Area MLUP include the following:

- **Anaheim Commercial/Industrial Redevelopment Project:** The project addresses the revitalization and upgrading of residential, commercial and industrial properties and public properties/facilities within the area. The part of the Project that is relevant to the MLUP is the portion of the South Anaheim Boulevard Subarea adjacent to I-5.
- **Sportstown Anaheim EIR:** The Anaheim City Council has certified EIR No. 320 and approved Area Development Plan No. 120 for the Anaheim Stadium property and certain outlying parcels. The objectives of the project include the establishment of a plan for the economic development and enhancement of the Anaheim Stadium Property. The project EIR has environmentally cleared construction of a new football stadium, 750,000 square feet of retail, 250,000 square feet of office, 500 hotel rooms, 150,000-square foot exhibition center, and reconfiguration of the existing 16,000 space parking area for up to 15,570 onsite spaces.
- **Anaheim Resort Specific Plan:** The City of Anaheim has adopted a Specific Plan for approximately 483 acres of land in the City's Anaheim Resort area. The Specific Plan identifies districts in establishing land uses and development standards/design guidelines and specified public facilities necessary for ultimate development in the Anaheim Resort Specific Plan area.
- **Hotel Circle Specific Plan:** This specific plan, approved in August of 1994, covers a 6.8-acre portion of the Anaheim Resort. The plan area is located north of Katella Avenue between Clementine Street and Haster Street/Anaheim Boulevard. At build-out, the plan provides for a total of 969 hotel rooms with accessory restaurant and retail uses.
- **Anaheim Stadium Renovation:** The project involves the leasing and renovation of Anaheim Stadium including the reduction of seating capacity from 70,500 to approximately 45,000 seats (47,000 seats with group seating) resulting in a net reduction in building area of approximately 96,000 square feet; reconfiguration of guest facilities including widening of the concourses at certain locations to accommodate the consolidation of some of the concessions into food courts; construction of up to approximately 90 new luxury suites to replace 113 existing suites; a new architectural facade, landscape enhancements; and, a new Stadium Club restaurant and lounge.

- **Disneyland Resort Specific Plan:** The Resort, including the Disneyland Theme Park, Disneyland Hotel, and Disneyland Pacific Hotel is one of the most famous tourist destinations in the world. The Walt Disney Company has unveiled plans for an expansion to the Disneyland Resort. This expansion will include a second theme park (Disneyland's California Adventure) as well as a 750-room luxury hotel within the theme park and a Retail Entertainment Center. The project is scheduled to commence construction in 1997 with a completion date in 2001. In addition, Disneyland is in the process of a complete renovation of Tomorrowland, one of the Park's most popular attractions.
- **Katella Avenue Smart Street:** The Orange County Transportation Authority has certified an EIR for the Katella Avenue Smart Street Project which addresses the potential impacts of widening Katella Avenue throughout the Project area.

In addition, the City of Anaheim has prepared environmental assessments separate from the Katella Avenue Smart Street Project at the following critical intersections:

- Katella Avenue and Harbor Boulevard
- Katella Avenue and Haster Street
- Katella Avenue and State College Boulevard
- **The I-5 Widening EIR/EIS:** Caltrans and the Federal Highway Administration have certified the EIR/EIS for the I-5 Freeway Widening.
- **City of Anaheim Utility Undergrounding Program:** The City has adopted a program to underground overhead utility facilities within the Project area.
- **Convention Center Master Plan:** The City has prepared a comprehensive master plan to expand the 700,000 square feet of existing exhibit space at the Anaheim Convention Center to include approximately 700,000 square feet of new exhibit space, meeting rooms, and prefunction space. The expansion is scheduled for completion in 1999.
- **South Central Area Sewer Deficiency Study:** The City has completed a study of the South Central City sewer system to determine sewer capacities and provide remedial solutions based upon the General Plan land uses and densities.
- **Other Transportation Studies:** Other relevant studies include the Orange County Transportation Authority (OCTA) Major Investment Study for Urban Rail, Orange County Commuter Rail Study, SR-91 (Riverside Freeway) widening, SR-57 HOV (High Occupancy Vehicle) Lanes, SR-57 extension to I-405 (San Diego Freeway), Transit Way Interchange at Cerritos and the SR-57, and the Metropolitan Drive Extension in the City of Orange. In addition to these studies, the OCTA is studying the feasibility of expanding commuter rail service by utilizing existing Amtrak rail lines.
- **City of Orange Katella Avenue Corridor:** Approved by the Orange City Council in October 1995, the Corridor is intended to provide for commercial and office uses with a specific focus on entertainment and recreational uses, regional and community-serving retail and service uses and higher intensity office developments.

The relationship of each of these programs and studies to the MLUP will be discussed in the EIR.

PROBABLE ENVIRONMENTAL EFFECTS

The EIR is being prepared to assess the potential environmental impacts that may arise in connection with future implementation of the Anaheim Stadium Area MLUP. Based on the environmental characteristics of the Project area and review of existing data and relevant programs, implementation of the proposed Project may have the potential to create environmental impacts in the following areas: aesthetics/visual resources, air quality, earth resources-geology, soils and seismicity, hazardous materials compliance, hydrology/water quality, land use, noise, public services, utilities and energy consumption, population, employment and housing, transportation/circulation, and cultural resources. The developed character of the Project area precludes the potential of sensitive plant and/or animal species inhabiting the site or the surrounding area; therefore, the MEIR will not address the topic of biological resources.

LEAD AGENCY

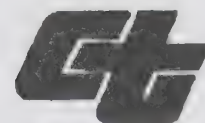
The City of Anaheim is the Lead Agency responsible for preparing the MEIR. The Project and environmental processing will be administered through the City of Anaheim Planning Department by:

Mr. Greg McCafferty, Associate Planner
City of Anaheim Planning Department
200 South Anaheim Boulevard
Anaheim, California 92805
(714) 254-5139, Ext. 5743

State of California - Department of Transportation

FACSIMILE COVER

ADM-0172 (Rev. 12/92)



FM 92 1372 M

Attention: GREG McCafferty		From: ATTENTION: CALTRANS - DISTRICT 12 2501 Pullman Street Santa Ana, CA 92705	
Unit / Company City of ANAHEIM.		Name of Sender Aileen Kennedy	
District / City		Date 1-8-97	Total Pages (including cover sheet) 3
Phone # (include area code)		FAX # (include area code) (714) 724-2552	ATSS FAX
FAX # (include area code) 254-5280		Phone # (include area code) (714) 724-2239	ATSS
Comment:		ORIGINAL DISPOSITION: <input type="checkbox"/> DESTROY <input type="checkbox"/> RETURN <input type="checkbox"/> CALL FOR PICK-UP	

Comments for the Anaheim Stadium
Area Master Land Use Plan



State of California

GOVERNOR'S OFFICE OF PLANNING AND RESEARCH

1400 TENTH STREET
SACRAMENTO 95814



LEE GRISSOM
DIRECTOR

PETE WILSON
GOVERNOR

DATE: November 18, 1996
TO: Reviewing Agencies
RE: ANAHEIM STADIUM AREA MASTER LAND USE PLAN
SCH# 96111041

Attached for your comment is the Notice of Preparation for the ANAHEIM STADIUM AREA MASTER LAND USE PLAN draft Environmental Impact Report (EIR).

Responsible agencies must transmit their concerns and comments on the scope and content of the NOP, focusing on specific information related to their own statutory responsibility, within 30 days of receipt of this notice. We encourage commenting agencies to respond to this notice and express their concerns early in the environmental review process.

Please direct your comments to:

GREG MC CAFFERTY
THE CITY OF ANAHEIM PLANNING DEPT.
200 SOUTH ANAHEIM BLVD. #162
ANAHEIM, CA 92805

with a copy to the Office of Planning and Research. Please refer to the SCH number noted above in all correspondence concerning this project.

If you have any questions about the review process, call at (916) 445-0613.

Sincerely,

ANTERO A. RIVASPLATA
Chief, State Clearinghouse

Attachments

cc: Lead Agency

NOT DISTRIBUTION LIST

S = sent by lead agency
X = sent by SCH

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- ☒ **Nadell Gayou**
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916/653-9107 Fax 916/653-9824
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- ☐ **Steve McAdam**
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San Francisco, CA 94102
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- ☒ **Nadell Gayou**
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- ☐ **Kim Dinh**
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1701 Nimbus Road, Suite A
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- ☐ **Brian Hunter**, Regional Manager
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707/944-3518 Fax 707/944-5563
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1234 East Shaw Avenue
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209/445-6152 Fax 209/445-6607
- ☒ **Department of Fish and Game**
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330 Golden Shore, Suite 50
Long Beach, CA 90802
310/590-5132 Fax 310/590-5192

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- ☐ **California Energy Commission**
1516 Ninth Street, MS-15
Sacramento, CA 95814
916/654-3944
- ☐ **Native American Heritage Comm.**
915 Capital Mall, Room 364
Sacramento, CA 95814
916/653-4692 Fax 916/657-5390
- ☐ **Douglas Long**
Public Utilities Commission
505 Van Ness Avenue
San Francisco, CA 94102
415/703-2011 Fax 415/703-1955
- ☒ **Betty Silva**
State Lands Commission
100 Howe Avenue, Suite 100-S
Sacramento, CA 95826
916/574-1872 Fax 916/574-1885
- ☐ **Gerald R. Zimmerman**
Colorado River Board
770 Fairmont Avenue, Suite 100
Glendale, CA 91201-1035
818/543-4676 Fax 818/543-541-4685
- ☐ **Tahoe Regional Planning**
Environmental Review
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702/588-4547 Fax 702/588-4527
- ☐ **Thomas Ottoman**
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- ☐ **Debby Eddy**
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510/236-1251 Fax 510/236-1380
- ☐ **CENTRAL COAST REGION (3)**
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805/549-3147 Fax 805/513-0347
- ☐ **LOS ANGELES REGION (4)**
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213/266-7558 Fax 213/256-7600
- ☐ **CENTRAL VALLEY REGION (5)**
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916/355-3000 Fax 916/355-3055
- ☐ **Fresno Branch Office**
3614 East 7th Street
Fresno, CA 93726
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- ☐ **Redding Branch Office**
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Redding, CA 96002
916/224-4845 Fax 916/224-4857
- ☐ **LAHONTAN REGION (6)**
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South Lake Tahoe, CA 96150
916/542-5400 Fax 916/544-2271
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Victorville, CA 92392-2359
619/241-6583 Fax 619/241-7308
- ☐ **COLORADO RIVER BASIN REGION (7)**
73720 Fred Waring Drive #100
Palm Desert, CA 92260-3564
619/346-7491 Fax 619/341-6820
- ☒ **SANTA ANA REGION (8)**
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Riverside, CA 92501-3139
714/782-4130 Fax 909/781-6288
- ☐ **SAN DIEGO REGION (9)**
9771 Clairemont Mesa Blvd., Suite B
San Diego, CA 92124-1311
619/467-2952 Fax 619/571-6972
- ☐ **OTHER** _____
- ☐ **OTHER** _____
- ☐ **OTHER** _____

CHN-14-1557 12.01 FROM SLO CCA CDR 31/142940200 P.03

DEPARTMENT OF TRANSPORTATION

DISTRICT 12
2501 PULLMAN STREET
SANTA ANA, CA 92705



January 8, 1997

Greg McCafferty
City of Anaheim
Planning Department
200 South Anaheim Boulevard # 162
Anaheim, CA. 92805

File: IGR/CEQA
SCH # 96111061

Subject: Anaheim Stadium Area Master Land Use Plan

Dear Mr. McCafferty:

Thank you for the opportunity to review and comment on the Anaheim Stadium Area Master Land Use Plan. The Proposed project will identify subareas or districts, establish land uses and zoning, development standards and design guidelines for each district, as well as, maximum development intensities. Specific development projects have not been identified as part of the MLUP. Caltrans District 12 is a responsible agency and has the following comments for your consideration.

The project will impact operations of the Santa Ana (I-5) and the Orange Freeway (SR-57). A traffic study should be prepared which would include existing and future average daily traffic volumes, traffic generation including peak hour, traffic distribution, intersection capacity utilization analysis along arterial roads and state freeways which might be impacted. Consideration should be given to the cumulative effects that development in the area will have on the transportation system. Further, the EIR should identify the mitigation measures and the funding sources which would be used to implement those measures.

In addition, coordination with the I-5 construction staging needs to be taken into account as there will be closures, detours within the area.

Greg McCafferty
January 8, 1997
Page 2

We appreciate the opportunity to comment on this document. If you have any questions concerning these comments please contact Aileen Kennedy on (714) 724-2239.

Sincerely,

Robert F. Joseph, Chief
Advance Planning Branch

cc: Tom Loftus, OPR
Ron Helgeson, HDQTRS Planning
Tom Persons, HDQTRS Traffic Operations
Gary Slater, Project Development
Tim Buchanan, Traffic Operations, North
Judy Heyer, Public Transp. and System Planning



ORANGE COUNTY BICYCLE COALITION

21 November 1996

Mr. Greg McCafferty, Associate Planner
City of Anaheim Planning Department
200 South Anaheim Blvd
Anaheim, CA 92805

re: Anaheim Stadium Area Master Land Use Plan

Dear Mr. McCafferty:

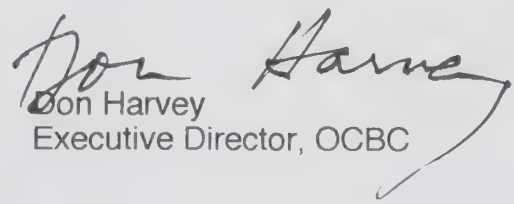
Thank you for the notification about the subject plan and the associated environmental documentation (NOP, EIR and MEIR). Please continue to keep OCBC informed.

I note the City's apparent interest in rail transportation. Rail transportation, by its very nature, requires a network of feeder vehicles. Bicycles are ideal feeder vehicles, especially in southern California, and should be considered in this application.

OCTA has shown interest in, and sensitivity to, bicycle transportation. See, for example, OCTA's Commuter Bikeways Strategic Plan, dated 22 May 1995. I note that this plan is not included in the Relevant Planning Programs to be considered, and I request that it be included and considered, as a measure of what ought, at a minimum, to be provided.

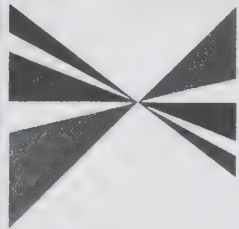
Thank you for considering these matters.

Very truly yours,


Don Harvey
Executive Director, OCBC



SOUTHERN CALIFORNIA



ASSOCIATION OF
GOVERNMENTS

Main Office

818 West Seventh Street

12th Floor

Los Angeles, California

90017-3435

t (213) 236-1800

f (213) 236-1825

www.scag.ca.gov

November 26, 1996

Mr. Greg McCafferty, Associate Planner
City of Anaheim Planning Department
200 South Anaheim Boulevard #162
Anaheim, CA 92805

RE: **Comments on the Notice of Preparation for the Draft EIR
No. 321 for the Anaheim Stadium Area Master Land Use
Plan - SCAG No. I 9600401**

Dear Mr. McCafferty:

Thank you for submitting the Notice of Preparation for the Draft EIR No. 321 for the Anaheim Stadium Area Master Land Use Plan to SCAG for review and comment. As areawide clearinghouse for regionally significant projects, SCAG assists cities, counties and other agencies in reviewing projects and plans for consistency with regional plans.

In addition, The California Environmental Quality Act requires that EIRs discuss any inconsistencies between the proposed project and the applicable general plans and regional plans (Section 15125 [b]). If there are inconsistencies, an explanation and rationalization for such inconsistencies should be provided.

Please provide a minimum of 45 days for SCAG to review the Draft EIR when this document is available. If you have any questions regarding the attached comments, please contact Bill Boyd at (213) 236-1963.

Sincerely,

VIVIANE DOCHE-BOULOS
Manager, Intergovernmental Review

H:\ANAHSTMP.NOP

Officers: • President: Mayor Pro Tem Dick Kelly, Palm Desert • First Vice President: Supervisor Yvonne Brathwaite Burke, Los Angeles County • Second Vice President: Mayor Bob Bartlett, City of Monrovia • Immediate Past President: Supervisor Bob Buster, Riverside

County of Imperial: Sam Sharp, Imperial County • David Dhillon, El Centro

County of Los Angeles: Yvonne Brathwaite Burke, Los Angeles County • Richard Alarcon, Los Angeles • Richard Alatorre, Los Angeles • Eileen Ansari, Diamond Bar • Bob Bartlett, Monrovia • George S. Bell • Hal Bernson, Los Angeles • Sue Bauer, Azusa • Marvin Braude, Los Angeles • Robert Mesch, Rosemead • Laura Chick, Los Angeles • Ann Crawley, Cerritos • Joe Dawidziak, Redondo Beach • Doug Drummond, Long Beach • John Ferraro, Los Angeles • Michael Feuer, Los Angeles • Lynn Foley, Calabasas • Ruth Galanter, Los Angeles • Helen Givens, Glendale • Jackie Goldberg, Los Angeles • Garland Hardeman, Inglewood • Mike Hernandez, Los Angeles • Nate Holden, Los Angeles • Abbe Land, West Hollywood • Barbara Messina, Alhambra • David Myers, Palmdale • George Nakano, Torrance • Jenny Oropeza, Long Beach • Beatrice Proo, Pico Rivera • Mark Rudley, Los Angeles • Richard Ruordan, Los Angeles • Albert Robles, South Gate • Marcine Shaw, Compton • Ray Smith, Bellflower • Rudy Svorinich, Los Angeles • Joel Wachs, Los Angeles • Rita Walters, Los Angeles • Judy Wright, Claremont • Paul Zee, South Pasadena

County of Orange: Marian Bergeson, Orange • Ron Bates, Los Alamitos • Art Brown, Buena Park • Jan Debay, Newport Beach • Richard Dixon, Lake Forest • Sandra Genis, Costa Mesa • Candace Haggard, San Clemente • Wally Linn, La Brea • Bev Perry, Brea

County of Riverside: Bob Buster, Riverside • Dennis Draeger, Calimesa • Dick Kelly, Palm Desert • Ron Loveridge, Riverside • Ron Roberts, Temecula

County of San Bernardino: Larry Walker, San Bernardino County • Bill Alexander, Rancho Camonga • Jim Bagley, Twentynine Palms • Eldre Bennett, Colton • David Eshleman, Fontana • Tom Minor, San Bernardino • Gwenn Norton, Perry, Chino Hills

County of Ventura: Judy Mikels, Ventura County • Andrew Fox, Thousand Oaks • Stan Daily, Camarillo • John Melton, Santa Paula

**COMMENTS ON THE NOTICE OF PREPARATION OF
A DRAFT ENVIRONMENTAL IMPACT REPORT
FOR THE CITY OF ANAHEIM
ANAHEIM STADIUM AREA MASTER LAND USE PLAN**

PROJECT DESCRIPTION

The project area encompasses approximately 640 acres, and is located in the south-central portion of the City of Anaheim in north central Orange County. The planning area is situated generally west of the Santa Ana River and SR-57 (Orange Freeway), south of the Southern California Edison easement and Cerritos Avenue, east of the I-5 (Santa Ana Freeway), and north of Chapman Avenue. Existing uses include Anaheim Stadium, Arrowhead Pond, Amtrack/Metrolink Station, and a mix of light industrial, office, retail, and service establishments. The Proposed LUP includes the area around the stadium, but not the stadium itself.

CONSISTENCY WITH REGIONAL COMPREHENSIVE PLAN AND GUIDE POLICIES

The Growth Management Chapter (GMC) of the Regional Comprehensive Plan and Guide (RCPG) contains the following policy that is particularly applicable and should be addressed in the Draft EIR for the proposed project¹:

- *The population, housing, and jobs forecasts, which are adopted by SCAG's Regional Council and that reflect local plans and policies, shall be used by SCAG in all phases of implementation and review.*
- *In areas with large seasonal population fluctuations, such as resort areas, forecast permanent populations. However, appropriate infrastructure systems should be sized to serve high-season population totals.*
- *The timing, financing, and location of public facilities, utility systems, and transportation systems shall be used by SCAG to implement the region's growth policies.*
- *Encourage local jurisdictions to achieve a balance between the types of jobs they seek*

¹ See Endnote.

to attract and housing prices.

- *Encourage patterns of urban development and land use which reduces costs of infrastructure construction and make better use of existing facilities.*
- *Encourage subregions to define an economic strategy to maintain the economic vitality of the subregion, including the development and use of marketing programs, and other economic incentives, which support attainment of subregional goals and policies.*
- *Support local jurisdictions' efforts to minimize the cost of infrastructure and public service delivery, and efforts to seek new sources of funding for development and the provision of services.*
- *Support local jurisdictions' actions to minimize red tape and expedite the permitting process to maintain economic vitality and competitiveness.*
- *Support provisions of incentives created by local jurisdictions to attract housing growth in job-rich subregions and job growth in housing-rich subregions.*
- *Encourage existing or proposed local jurisdictions' programs aimed at designing land uses which encourage the use of transit and thus reduce the need for roadway expansion, reduce the number of auto trips and vehicle miles traveled, and create opportunities for residents to walk and bike.*
- *Encourage local jurisdictions' plans that maximize the use of existing urbanized areas accessible to transit through infill and redevelopment.*
- *Support local plans to increase density of future development located at strategic points along the regional commuter rail, transit systems, and activity centers.*
- *Support local jurisdictions' to establish mixed-use clusters and other transit-oriented developments around transit stations and along transit corridors.*
- *Encourage developments in and around activity centers, transportation node corridors, underutilized infrastructure systems, and areas needing recycling and redevelopment.*
- *Support and encourage settlement patterns which contain a range of urban densities.*
- *Encourage planned development in locations least likely to cause adverse environmental*

impact.

- *Support the protection of vital resources such as wetlands, groundwater recharge areas, woodlands, production lands, and land containing unique and endangered plants and animals.*
- *Support the protection of vital resources such as wetlands, groundwater recharge areas, woodlands, production lands, and land containing unique and endangered plants and animals.*
- *Encourage the implementation of measures aimed at the preservation and protection of recorded and unrecorded cultural resources and archaeological sites.*
- *Discourage development, or encourage the use of special design requirements, in areas with steep slopes, high fire, flood, and seismic hazards.*
- *Encourage mitigation measures that reduce noise in certain locations, measures aimed at preservation of biological and ecological resources, measures that would reduce exposure to seismic hazards, minimize earthquake damage, and develop emergency response and recovery plans.*
- *Encourage efforts of local jurisdictions in the implementation of programs that increase the supply and quality of housing and provide affordable housing as evaluated in the Regional Housing Needs Assessment (RHNA).*
- *Encourage efforts of local jurisdictions, employers and service agencies to provide adequate training and retraining of workers, and prepare the labor force to meet the future challenges of the regional economy.*
- *Encourage employment development in job-poor localities through support of labor force retraining programs and other economic development measures.*
- *Support local jurisdictions and other service providers in their efforts to develop sustainable communities and provide, equally to all members of society, accessible and effective services such as: public education, housing, health care, social services, recreational facilities, law enforcement, and fire protection.*

The Regional Mobility Element (RME) also has policies pertinent to this proposed project². This chapter links the goal of sustaining mobility with the goals of fostering economic development, enhancing the environment, reducing energy consumption, promoting transportation-friendly development patterns, and encouraging fair and equitable access to residents affected by socio-economic, geographic and commercial limitations. Among the relevant policies of this chapter are the following:

- *Promote Transportation Demand Management (TDM) programs along with transit and ridesharing facilities as a viable and desirable part of the overall mobility program while recognizing the particular needs of individual subregions.*
- *Support the extension of TDM program implementation to non-commute trips for public and private sector activities.*
- *Support the coordination of land use and transportation decisions with land use and transportation capacity, taking into account the potential for demand management strategies to mitigate travel demand if provided for as a part of the entire package.*
- *Urban form, land use and site-design policies should include requirements for safe and convenient non-motorized transportation, including the development of bicycle and pedestrian-friendly environments near transit.*
- *Support the use of market incentives as a mechanism to affect and modify behavior toward the use of alternative modes for both commute and non-commute travel.*
- *Necessary steps to develop and implement Smart Corridors and Smart Streets to achieve regional mobility objectives shall be initiated.*
- *Methods to improve safety and reduce incidents on the regional transportation system will be considered.*
- *The development of the regional transportation system should include a non-motorized transportation system that provides an effective alternative to auto travel for appropriate trips. The planning and development of transportation projects and systems should incorporate the following, as appropriate:*

² See Endnote.

- a ○ Provision of safe, convenient, and continuous bicycle and pedestrian infrastructure to and throughout areas with existing and potential demand such as activity areas, schools, recreational areas (including those areas served by trails), which will ultimately offer the same or better accessibility provided to the motorized vehicle.*
 - b ○ Accessibility to and on transit (bus terminals, rail stations, Park-And-Ride lots), where there is demand and where transit boarding time will not be significantly delayed.*
 - c ○ Maintenance of safe, convenient, and continuous non-motorized travel during and after the construction of transportation and general development projects. Existing bikeways and pedestrian walkways should not be removed without mitigation that is as effective as the original facility.*
- Entities and programs that currently support the auto should be encouraged to provide the same types of services for non-motorized transportation, including education, promotion, and enforcement.*
- Growth in the demand for goods movement will be accommodated through the provision of adequate multi-modal and intermodal infrastructure that is consistent with overall regional goals, objectives, and policies.*
- Demand for increased goods movement will be given consideration in corridors where system connectivity and gap closure projects are being planned.*
- Arterial truck access routes will be coordinated for the purpose of improving system connectivity, eliminating circuitous routings, and reducing delays.*
- The potential for adverse impacts to mode shares, diversion of business to other ports and loss of cost-competitiveness in goods movement to, from, and through the SCAG region will be considered in the development and implementation of local and regional plans.*
- Planning to accommodate multi-modal and inter-modal goods movement shall be an integral part of the land use and circulation elements of local government general plans and specific plans.*

- *In order to assist in the identification of potential bottlenecks that could occur downstream of cargo flows, the identification of potential intermodal routes that cross or connect to provide future transfer facility nodes (highway, rail, harbor or airports) shall be encouraged.*
- *Support long-range corridors that will employ multi-modal and inter-modal strategies designed to maintain mobility for people, goods, services, and information in ways that are safe, efficient, cost-effective, meet environmental mandates, and foster economic development.*
- *Support long-range projects and rights-of-way preservation programs that foster the development of an urban form conducive to reducing single occupant vehicle trips.*

- - -

ENDNOTE

SOUTHERN CALIFORNIA ASSOCIATION OF GOVERNMENTS

Roles and Authorities

SCAG is a *Joint Powers Agency* established under California Government Code Section 6502 et seq. Under federal and state law, SCAG is designated as a Council of Governments (COG), a Regional Transportation Planning Agency (RTPA), and a Metropolitan Planning Organization (MPO). SCAG's mandated roles and responsibilities include the following:

SCAG is designated by the federal government as the Region's *Metropolitan Planning Organization* and mandated to maintain a continuing, cooperative, and comprehensive transportation planning process resulting in a Regional Transportation Plan and a Regional Transportation Improvement Program pursuant to 23 U.S.C. §134(g)-(h), 49 U.S.C. §1607(f)-(g) et seq., 23 C.F.R. §450, and 49 C.F.R. §613. SCAG is also the designated *Regional Transportation Planning Agency*, and as such is responsible for both preparation of the Regional Transportation Plan (RTP) and Regional Transportation Improvement Program (RTIP) under California Government Code Section 65080.

SCAG is responsible for developing the demographic projections and the integrated land use, housing, employment, and transportation programs, measures, and strategies portions of the *South Coast Air Quality Management Plan*, pursuant to California Health and Safety Code Section 40460(b)-(c). SCAG is also designated under 42 U.S.C. §7504(a) as a *Co-Lead Agency* for air quality planning for the Central Coast and Southeast Desert Air Basin District.

SCAG is responsible under the Federal Clean Air Act for determining *Conformity* of Projects, Plans and Programs to the Air Plan, pursuant to 42 U.S.C. §7506.

Pursuant to California Government Code Section 65089.2, SCAG is responsible for *reviewing all Congestion Management Plans (CMPs) for consistency with regional transportation plans* required by Section 65080 of the Government Code. SCAG must also evaluate the consistency and compatibility of such programs within the region.

SCAG is the authorized regional agency for *Inter-Governmental Review* of Programs proposed for federal financial assistance and direct development activities, pursuant to Presidential Executive Order 12,372 (replacing A-95 Review).

SCAG reviews, pursuant to Public Resources Code Sections 21083 and 21087, *Environmental Impact Reports* of projects of regional significance for consistency with regional plans [California Environmental Quality Act Guidelines Sections 15206 and 15125(b)].

Pursuant to 33 U.S.C. §1288(a)(2) (Section 208 of the Federal Water Pollution Control Act), SCAG is the authorized *Areawide Waste Treatment Management Planning Agency*.

SCAG is responsible for preparation of the *Regional Housing Needs Assessment*, pursuant to California Government Code Section 65584(a).

SCAG is responsible (with the San Diego Association of Governments and the Santa Barbara County/Cities Area Planning Council) for preparing the *Southern California Hazardous Waste Management Plan* pursuant to California Health and Safety Code Section 25135.3.

CHAIRMAN
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DIRECTOR
ORANGE COUNTY
WATER DISTRICT

ALTERNATE
DONALD J. SALTARELLI
SUPERVISOR
THIRD DISTRICT

DANA M. SMITH
EXECUTIVE OFFICER

December 4, 1996

Greg McCafferty
City of Anaheim Planning Department
200 South Anaheim Boulevard, #162
Anaheim, CA 92805

SUBJECT: Notice of Preparation EIR #321, Anaheim Stadium Area MLUP

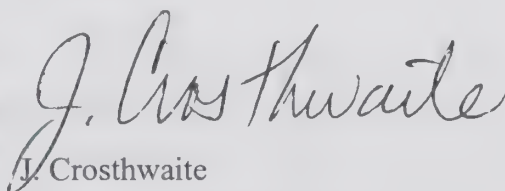
Dear Mr. McCafferty,

Thank you for the opportunity to comment on the proposed Anaheim Stadium Area MLUP and EIR. Any changes in local governmental boundaries proposed as part of the MLUP are subject to approval by the Local Agency Formation Commission (LAFCO). LAFCO becomes a responsible agency as defined in Government Code Section 21069.

If future boundary changes are anticipated, the EIR should include a brief section explaining the proposed boundary changes, the LAFCO process, the factors this agency uses in its analysis and the reasons for proposing the changes.

If you have any questions, please feel free to call me at (714) 834-2556.

Sincerely,



J. Crosthwaite
Assistant Executive Officer



ANAHEIM CITY SCHOOL DISTRICT

November 26, 1996

1001 South East Street
Anaheim, CA 92805 - 5749
Phone (714) 517 - 8500
FAX (714) 517 - 8538

Mr. Greg McCafferty, Associate Planner
City of Anaheim Planning Department
200 South Anaheim Boulevard #162
Anaheim, California 92805

RE: **COMMENTS FOR PUBLIC SCOPING MEETING OF 11/26/96**
NOTICE OF PREPARATION, EIR #321 -- ANAHEIM STADIUM AREA
MASTER LAND USE PLAN

Dear Mr. McCafferty:

The Anaheim City School District ("ACSD") is pleased to participate in defining the scope of the proposed Environmental Impact Report. It is imperative we address the severe overcrowding that will result from any change of land use designations that will increase development, including the proposed Anaheim Stadium Area MLUP (the "Project"). Potential environmental issues effecting the District must be reviewed and considered. Any new approvals increasing commercial and residential activity will add to the overcrowding of school facilities. This overcrowding can only be mitigated with the construction of new facilities.

The ACSD is requesting consideration be given to identifying the severe impacts on the District, and how mitigation can occur. I am requesting a meeting(s) be held between the District and the City to review the comprehensive data and possible impacts of the proposed Project.

We look forward to meeting with you to discuss the various issues. If you have any immediate questions or concerns, please call me at (714) 517-9271.

Sincerely,

Michael R. Perez
Director, Facilities & Planning

(MP\Data\Anaheim\Stadium\ScopReq.Doc)

a great place to learn!

**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SANTA ANA REGION**

3737 MAIN STREET, SUITE 500
RIVERSIDE, CA 92501-3339
PHONE: (909) 782-4130
FAX: (909) 781-6288



December 11, 1996

Greg McCafferty
City of Anaheim
200 South Anaheim Blvd., #162
Anaheim, CA 92805

**NOTICE OF PREPARATION (NOP) OF A DRAFT ENVIRONMENTAL IMPACT REPORT FOR
THE ANAHEIM STADIUM AREA MASTER LAND USE PLAN, SCH #96111061**

Dear Mr. McCafferty:

We have reviewed the NOP for this project. In response to the statutory concerns of this office, the Draft EIR should address the following:

I. Water Quality and Beneficial Uses

A. Potential impacts of the proposed project on surface and groundwater quality:

- Any impacts that could cause impairment of narrative or numerical water quality objectives contained in the 1995 Water Quality Control Plan for the Santa Ana River Basin need to be addressed
- Construction activities (including grading) that could result in water quality impacts.
- Soil characteristics related to water quality (potential for erosion and subsequent siltation, increase or decrease in percolation).
- Impacts of toxic substances handling and/or disposal (if appropriate).

B. Potential impacts of the proposed project on surface and groundwater beneficial uses.

- If the project impacts any riparian or wetland habitats, a complete description of the impacts, acreage of the impacts, and any proposed mitigation should be provided

C. Mitigation of Adverse Impacts.

II. Water, Wastewater and Solid Waste Service

A. Water

- Availability of water for the proposed project.
- Existing infrastructure: location of water supply lines, tie-ins.
- Applications or permits required for water acquisition.
- Impact or calculated project demand on water supply.

B. Waste Disposal/Treatment

- Types and amounts of waste materials generated by project.
- Proposed waste treatment and disposal methods. Existing infrastructure:
 - * treatment facilities: location, current capacity, treatment standards, master treatment facilities expansion plan (if appropriate)
 - * treatment plant collection system: location of major trunk lines and tie-ins, current capacity
 - * disposal facilities: location, capacity
- Applications or permits required to implement waste disposal.
- Impact of calculated project waste volume on capacity of existing and proposed treatment and disposal facilities.

III Permits

- If no new point discharges are created from the proposed project the stormwater runoff will be regulated by an areawide stormwater discharge permit under the National Pollutant Discharge Elimination System (NPDES).
- A notice of intent (NOI) with the appropriate fees for coverage of the project under the General Construction Activity Storm Water Runoff Permit must be submitted to the State Water Resources Control Board at least 30-days prior to initiation of construction activity at the site. This is required for any construction activity over five acres in area.

- If a Section 404 permit from the Army Corp of Engineers is required for this project, a Section 401 Water Quality Certification is also required from the Regional Board. This certification verifies that the federal 404 permit complies with the state's water quality standards. Please note that the time frame for the issuance of a permit can be as long as 180 days from the time the permit application is accepted as complete.
- A National Pollutant Discharge Elimination System (NPDES) permit for any discharge of wastes to surface waters or a Waste Discharge Requirements for any discharge of wastes to land is required by the Regional Board.
- If reclaimed water is to be used in the proposed project, Water Reclamation Requirements will have to issued by the Regional Board.

We look forward to reviewing the Draft EIR when it becomes available. If you have any questions, please call me at (909) 782-4241.

Sincerely,



Scott A. Dawson
Environmental Specialist
Planning Section

cc: Chris Belsky - State Clearinghouse



CITY OF GARDEN GROVE, CALIFORNIA

11222 ACACIA PARKWAY, P.O. BOX 3070, GARDEN GROVE, CALIFORNIA 92642

(714) 741-5312

December 16, 1996

Mr. Greg McCafferty, Associate Planner
City of Anaheim Planning Department
200 South Anaheim Boulevard #162
Anaheim, CA 92805

Dear Mr. McCafferty:

Subject: Notice of Preparation of an Environmental Impact Report for the Anaheim Stadium
Area Master Land Use Plan

Thank you for providing the City of Garden Grove with the opportunity to review and comment on the Notice of Preparation (NOP) for the Anaheim Stadium Area Master Land Use Plan (MLUP). As stated in your NOP, the MLUP will identify land uses, zoning, development standards, and maximum development intensities for an approximately 640-acre area surrounding Anaheim Stadium in the City of Anaheim.

The EIR should evaluate the potential impacts the maximum development intensities envisioned by the MLUP may have on surrounding communities such as Garden Grove. Specifically, the EIR should discuss the impacts the types of uses proposed under the MLUP will have on surrounding communities, the impacts the creation of additional jobs within the MLUP will have on housing demand, traffic circulation and infrastructure impacts, and potential impacts on City services.

We would appreciate receiving a copy of the EIR and any other documents associated with the project when they become available. Thank you for your attention to these issues. If you have any questions, please call me at (714) 741-5312.

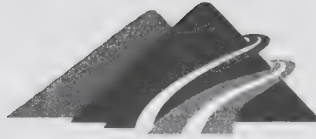
Sincerely,

Mel Lee
Associate Planner



San Joaquin Hills Corridor Agency Foothill/Eastern Corridor Agency

Chairman: Patricia Bates
Laguna Niguel Chairman: Scott Diehl
San Clemente



TRANSPORTATION CORRIDOR AGENCIES

William Woollett, Jr.
Chief Executive Officer

Walter D. Kreutzen
Executive Vice President
Finance & Administration

Gregory G. Henk
Executive Vice President
Design & Construction

December 4, 1996

Greg McCafferty
Associate Planner
City of Anaheim Planning Department
200 South Anaheim Blvd., #162
Anaheim, CA 92805

Subject: Notice of Preparation (NOP) Environmental Impact Report (EIR) No. 321
for the Anaheim Stadium Area Master Land Use Plan.

Dear Mr. McCafferty,

Thank you for the opportunity to review and comment on the NOP for the Draft EIR No. 321 for the Anaheim Stadium Area Master Land Use Plan. The Transportation Corridor Agencies (TCA) has no comments on this document.

If you have any questions, please contact me at (714) 513-3483.

Sincerely,

Macie Cleary-Milan
Principal Environmental Analyst

cc: Steve Letterly, TCA





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December 19, 1996

Mr. Greg McCafferty, Associate Planner
City of Anaheim Planning Department
200 South Anaheim Boulevard
Anaheim, CA 92805

**Subject: Notice of Preparation for EIR No. 321
Anaheim Stadium Area Master Land Use Plan**

Dear Mr. McCafferty:

Orange County Transportation Authority staff has reviewed the Notice of Preparation for the Anaheim Stadium Area Master Land Use Plan EIR. There are several transportation issues concerning bus and train service, along with street improvements that should be considered in the EIR

Bus Service

OCTA currently provides bus service to the project area. The service consists of two local bus routes (Routes 49 via State College Blvd. and 50 via Katella Ave.), one rail feeder route (Route 439 service to the city business area), and one special service route (Route 50B) on Katella Ave. which provides service to the Anaheim Angels home games. It is expected that the proposed development will increase the demand for bus service. Additionally, there are several bus stops located throughout the project area and bus turnouts should be considered for each of these locations. Once more detailed plans are available, we will be able to determine which locations will require a bus turnout versus a concrete bus pad.

Rail right-of-way (ROW)

- OCTA owns the rail ROW within the project area which includes two active mainline tracks. Currently there is a train station owned by the city of Anaheim, along with active passenger commuter and inter city freight services operated on the tracks that bisect the parcel under review. The corridor is a federally designated high-speed rail corridor.
- Rail service operates in the corridor 24-hours per day, 7 days a week. ROW maintenance occurs during hours of minimal train traffic (12:00 am - 5:00 am) requiring bright lights and heavy equipment at times. Metrolink, the

Mr. Greg McCafferty, Associate Planner

December 19, 1996

Page 2

commuter rail service operator in the corridor, is exempt from local ordinances restricting noise.

- OCTA can provide the city information on Metrolink schedules. The city will need to contact Amtrak, Burlington Northern/Santa Fe Railroad and Union Pacific Railroad for information on other passenger and freight operations. These agencies should also be notified about developments effecting the ROW.
- OCTA, in conjunction with the city of Anaheim, has plans to construct an Intermodal Transportation Center (ITC) in the project vicinity. Issues relating to location, design, parking availability and access still need to be addressed. Parking availability and proximity to the commuter rail station is also an issue of concern.
- No landscaping will be permitted on the Federally owned ROW since irrigation water undermines the track bed. Also, Railroad Administration and Public Utilities Commission clearance is important to consider when planning landscaping adjacent to ROW.
- Drainage improvements from existing parcels to the ROW at Katella to Santa Ana River and State College should be considered.
- Fencing or sound walls along the ROW may be necessary for development adjacent to the ROW. The city will need to plan improvements in such a way that people are kept off of the ROW. Pedestrian access must be diverted away from the ROW since the trains will travel up to 90 mph.
- Grade separation impacts should be considered when planning improvements, especially at Douglas and Katella.

Street and Freeway Improvements

- Katella Avenue is a designated Smart Street. Project Impacts to Katella Avenue should be analyzed and, if necessary, mitigated to ensure environmental clearance and consistency with Smart Street implementation plan goals relative to traffic level of service.
- The I-5 construction project, implemented by OCTA and Caltrans, will be underway in the area understudy for the next five years. Documents and schedules concerning this project should be taken into consideration when planning any adjoining project.

Mr. Greg McCafferty, Associate Planner
December 19, 1996
Page 3

Please review the notes in the enclosed marked-up document for further clarification. We appreciate the opportunity to provide input on this project. If you have any questions or need any additional information, please call me at (714) 560-5992.

Sincerely,

A handwritten signature in cursive script, reading "Pamela Galera", with a long horizontal flourish extending to the right.

Pamela Galera
Assistant Transportation Analyst



COUNTY SANITATION DISTRICTS OF ORANGE COUNTY, CALIFORNIA

December 12, 1996

phone:
(714) 962-2411

mailing address:
P.O. Box 8127
Mountain Valley, CA
92728-8127

street address:
844 Ellis Avenue
Mountain Valley, CA
92708-7018

Greg Mc Cafferty, Associate Planner
Planning Department
City of Anaheim
200 South Anaheim Boulevard, #162
Anaheim, CA 92805

SUBJECT: Preparation of Draft Environmental Impact Report #321
Re Anaheim Stadium Area Master Land Use Plan

Member Agencies

Cities

Anaheim
Brea
Buena Park
Cypress
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Fullerton
Huntington Beach
Irvine
La Habra
La Palma
Los Alamitos
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Orange
Placentia
Santa Ana
Seal Beach
Stanton
Tustin
Villa Park
Yorba Linda

County of Orange

Sanitary Districts

Costa Mesa
Garden Grove
Midway City

Water Districts

Irvine Ranch

This is in response to your notice dated November 25, 1996 that the City will prepare a Draft EIR for an Anaheim Stadium Master Plan. The plan includes approximately 650 acres between the Santa Ana River and State College Boulevard North of Chapman Avenue.

The area is within County Sanitation District No. 2 and previous planning has shown commercial, office and high intensity office for this site.

You are requested to calculate the expected sewage to be generated from the proposed development and compare it to the District's previous plans. For your calculations, use flow coefficients of:

- 100 gallons per day per acres (gpd/acre) for estate density residential (1-3 d.u./acre);
- 1615 gpd/acres for low density residential (4-7 d.u./acre);
- 3880 gpd/acre for medium density residential (8-16 d.u./acre);
- 5880 gpd/acre for medium-high density residential (17-25 d.u./acre);
- 7945 gpd/acre for high density residential (26-35 d.u./acre);
- 3230 gpd/acre for commercial;
- 4520 gpd/acre for industrial;
- 200 gpd/1,000 sq.ft. gross floor area (GFA) for high intensity office or high-rise commercial;
- 150 gpd/room for hotels and motels;
- 50 gal./seat for restaurants, and
- 200 gpd/acre for recreation and open space usage.





COUNTY SANITATION DISTRICTS OF ORANGE COUNTY, CALIFORNIA

Greg Mc Cafferty

Page 2

December 12, 1996

phone:

(714) 962-2411

mailing address:

P.O. Box 8127
Fountain Valley, CA
92728-8127

street address:

10844 Ellis Avenue
Fountain Valley, CA
92708-7018

Member Agencies

Cities

Anaheim
Brea
Buena Park
Cypress
Fountain Valley
Fullerton
Huntington Beach
Irvine
La Habra
La Palma
Los Alamitos
Newport Beach
Orange
Placentia
Santa Ana
Seal Beach
Stanton
Tustin
Villa Park
Yorba Linda

County of Orange

Sanitary Districts

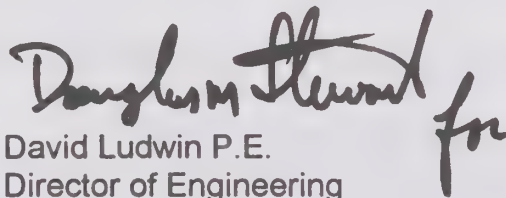
Costa Mesa
Garden Grove
Midway City

Water Districts

Irvine Ranch

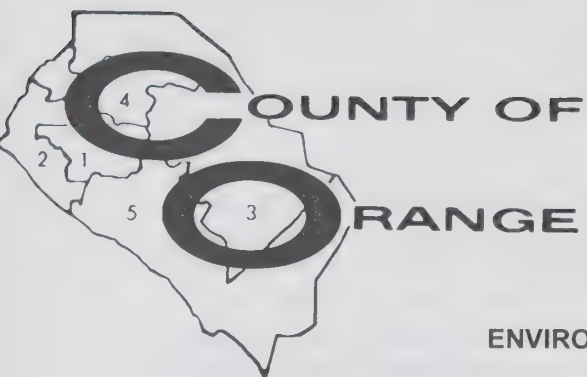
Wastewater generated within the Districts' service area is processed at treatment plants located in Fountain Valley and Huntington Beach. The Districts operate under an NPDES permit issued by the California Regional Water Quality Control Board and the United States Environmental Protection Agency. This permit has a set discharge limit for biochemical oxygen demand (BOD) and suspended solids (SS), which are affected by the flow received for treatment. Increases in flow require additional, costly increases in pumping energy, secondary treatment and solids disposal. Industrial users should take on-site measures to reduce the load strength of the sewage. Commercial users should incorporate all practical and mandated water conservation measures. All users should use ultra-low flow water fixtures to reduce the volume of sewage to the system.

Other regulations such as those adopted by the South Coast Air Quality Management District (SCAQMD) pursuant to the Air Quality Management Plan (AQMP) may also impact the proposed project. Therefore you should also review this project in light of the rules and requirements of other regulating agencies.


David Ludwin P.E.
Director of Engineering

TMD:dl

J:\WPDOC\ENG\12196\TD121196.LT1



ENVIRONMENTAL MANAGEMENT AGENCY
PLANNING

DEC 23 1996

NCL 96-82

JOHN W. SIBLEY
ACTING DIRECTOR, EMA

THOMAS B. MATHEWS
DIRECTOR OF PLANNING

300 N. FLOWER ST.
THIRD FLOOR
SANTA ANA, CALIFORNIA

MAILING ADDRESS:
P.O. BOX 4048
SANTA ANA, CA 92702-4048

TELEPHONE:
(714) 834-4643
FAX # 834-2771
DPC # 834-4772

Greg McCafferty Associate Planner
City of Anaheim
Planning Department
200 South Anaheim Boulevard
Anaheim, CA 92805

SUBJECT: NOP for the Anaheim Stadium Area Master LUP EIR

Dear Mr. McCafferty:

The above referenced item includes the preparation of a MLUP and Master EIR (MEIR) for the development of the area surrounding, but not including, the Anaheim Stadium property. The Project will include the completion of planning documents that will guide development of the greater Stadium Area through detailed zoning and development standards and design guidelines. The MLUP will also include a master landscape plan, streetscape program, identity program and public facilities plan. Apart from the streetscape and identity programs, and certain public improvements, the MLUP will not provide for any specific development projects; rather it is intended to provide a range of land uses and development intensity for future development proposals through a comprehensive land use plan.

The Project area encompasses approximately 640 acres, and is located in the south-central portion of the City of Anaheim in north central Orange County. The project area is located generally west of the Santa Ana River and the SR-57 (Orange Freeway), south of the Southern California Edison easement and Cerritos Avenue, east of the I-5 (Santa Ana Freeway), and north of Chapman Avenue.

The County of Orange has reviewed the NOP resulting in the following comments:

TRANSPORTATION ISSUES

1. Our previous comments about the DEIR for the Anaheim Sports Center, dated March 1, 1996 (See Attachment) also applies to the subject project and should be considered in the preparation of the DEIR.



FLOOD CONTROL ISSUES

2. East Garden Grove-Wintersburg Drainage Basin (C05)

The west portion of the project area drains into OCFCD's Spinnaker Storm Drain (C05P21) which discharges into OCFCD's regional facility East Garden Grove-Wintersburg channel (C05). The existing Spinnaker Storm Drain and the East Garden Grove-Wintersburg Channel are currently deficient to convey 100-year discharges.

Consequently, development should preclude from contributing additional discharge to the downstream channel system than currently exists today.

3. Southeast Anaheim Channel Drainage Basin (E12)

The central portion of the project area drains into Southeast Anaheim Channel (E12) which is deficient in its ability to convey 100-year discharges. Consequently, development draining into Facility E12 should be appropriately mitigated to avoid increasing runoff into E12 worsening the existing deficiency. The Santa Ana River within the project limits has been widened as part of the Federal Santa Ana River Mainstem Project (SARP).

4. Santa Ana River and Residual Flood Plains

Portions of the subject project lies within the 100-year Santa Ana River (SAR) floodplain as identified by the Federal Emergency Management Agency (FEMA). Until such time as the floodplain is removed, building improvements within the SAR floodplain will need to satisfy the National Flood Insurance Program (NFIP) and your City's floodplain ordinance.

Other residual floodplains resulting from regional facilities such as the East Garden Grove-Wintersburg Channel and South East Anaheim Channel could present even after the SAR floodplain has been removed. Currently, FEMA and this agency are attempting to delineate the residual floodplains underlying the SAR floodplain. At this time no certain date can be provided as to when the residual floodplains study will be completed.

Open Space Recreation

5. The DEIR should identify the Regional Santa Ana River Riding and Hiking Trail, and the joint OCTA/County "Commuter Bikeways Strategic Plan" facilities. Potential impacts, if any, to these facilities should be discussed. Appropriate mitigation measures including construction stage mitigation should be provided.
6. As mitigation for the proposed project, the DEIR should propose to provide urban edge/landscaping enhancements for the Santa Ana River Greenbelt Corridor. In addition to landscaping, these enhancements could include amenities for trail users such as rest stops, restrooms and drinking fountains.

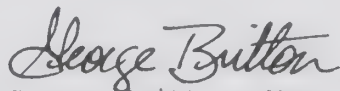
7. The "Project Description" of DEIR should note that the project borders on the Santa Ana River Greenbelt Corridor that includes the Santa Ana River Riding and Hiking Trail and the Santa Ana River Bikeway. In addition to motorized transportation routes, regional access to the site is also provided by the regional trail and bikeway. With the potential for thousands of employees, and for the first time visitors reaching the venue in a non-motorized manner, discussion as to how this will affect the river trail and its users should be addressed.
8. It appears the project also borders on the Southern Pacific Railroad route that at one time extended from Anaheim to Tustin. The tracks have been abandoned from Tustin westerly to Glassell Avenue in Orange; from Glassell westerly the route is still active. The County and the Cities of Orange, Tustin, and Villa Park are working towards implementation of a Class I (paved off-road) regional bikeway along this route, which extends from El Camino Real in Tustin to ultimate connection with the Santa Ana River Bikeway. Known as the Tustin Branch Trail, this route is depicted on the Commuter Bikeways Strategic Plan adopted by OCTA in 1995.

The DEIR should address the master planned connection of the Tustin Branch Trail to the Santa Ana River Trail, and its potential extension westerly along the Southern Pacific right-of-way (either adjacent to the existing tracks or in place of the tracks, should this route be abandoned by Southern Pacific in the future). This bikeway would potentially provide excellent east-west access to the project site, to complement the north-south access provided by the Santa Ana River Bikeway.

9. The DEIR should explore the feasibility of implementing a Class I bikeway network throughout the project location as a mitigation measure to reduce traffic congestion, vehicular noise, and air pollution. This should be supplemented by a network of Class II (on-road, striped lanes) bike lanes. A Class I bikeway linking the Santa Ana River Bikeway, the Amtrak Station, the potential Southern Pacific bikeway, and the various proposed land uses would greatly enhance non-motorized transportation and recreation in the project vicinity.

Thank you for the opportunity to respond to the above NOP. If you have any questions or need to contact us, please call Charlotte Harryman at (714) 834-2522.

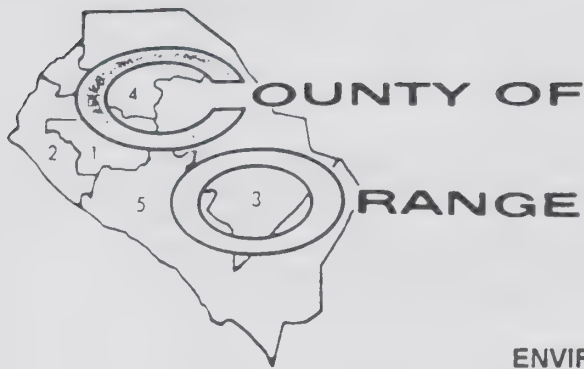
Very truly yours,



George Britton, Manager
Environmental & Project Planning Division

. Attachment:

CH:sf
6121809183348



ENVIRONMENTAL MANAGEMENT AGENCY
PLANNING

NCL 96-9

MAR 01 1996

MICHAEL M. RUANE
DIRECTOR, EMA

THOMAS B. MATHEWS
DIRECTOR OF PLANNING

LOCATION:
300 N. FLOWER ST
THIRD FLOOR
SANTA ANA, CALIFORNIA

MAILING ADDRESS:
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SANTA ANA, CA 92702-4048

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Greg McCafferty, Associate Planner
City of Anaheim
Planning Department
200 South Anaheim Boulevard
Anaheim, CA 92805

SUBJECT: DEIR for the Anaheim Sports Center

Dear Mr. McCafferty:

The above referenced item is a Draft Environmental Impact Report DEIR for the City of Anaheim. The project is located northeast of the Interstate 5 (I-5) Freeway, east of State College Boulevard, south of Katella Avenue, west of the Santa River and the Orange Freeway (SR-57), and north of Orangewood Avenue. The project site is immediately adjacent to the Santa Ana River and its paralleling trails and is in close proximity to the Katella Maintenance Yard. These are all vital County facilities.

The purpose of the project is the renovation of the existing Anaheim Stadium, reconfiguration of the 16,000-space parking area to include 14,000 on-site spaces, construction of a new stadium with a seating capacity of either 45,000 or 70,500 seats, complementary land uses consisting of retail/entertainment, office, exhibition activities, two hotels, a youth sports center and available off-site parking to be utilized during major sporting events. The County is generally supportive of this comprehensive project, subject to its being implemented in a manner which is complementary to the key County facilities and issues identified herein.

The County of Orange has reviewed the DEIR resulting in the following comments:

TRANSPORTATION ISSUES

1. The project will contribute traffic to the proposed Metropolitan Drive and to a number of other arterials in the area. This section of Metropolitan Drive (Orangewood to Lampson) is not shown on any of the project graphics. Since this facility is on the MPAH, we suggest that all affected graphics in this report be revised to show this facility. The base case alternative and the proposed project alternative should identify the amount of traffic that will be contributed to this facility by the project. The report should also

ATTACHMENT

include mitigation measures and a financial strategy to address project impacts on this and other facilities impacted by the proposed project, including payment of the project's pro-rata share of the construction/ improvement cost to these facilities. The plan to address the overall circulation improvements should be coordinated with the affected jurisdictions.

2. The actual trips generated by the site are repeatedly shown in the DEIR to consist of trips created by the entertainment/retail, hotel and office sites. However, there is no indication that the trips created by the proposed new and remodeled stadiums, the youth center, and the exhibition space were considered. The report needs to address trip generation and distribution associated with these uses.
3. Although it is our understanding that the stadiums will operate one at a time on any given day and the exhibition space will operate on days when a major sporting event is not taking place, traffic at and around the site will be affected by more trips due to the increased frequency of events held on the site. The study should address this increased frequency of trips associated with these events and the trips generated by them as they will create a significant increase in traffic within the study area. Also, football and baseball seasons, together with pre-season activities, generally overlap. While the two events are not regularly planned to operate at the same time, trips in and out of the stadiums for events scheduled on the same day will still contribute to traffic overlap in the project area and on transportation and circulation system. This needs to be addressed in the EIR.
4. It is not clear from the report or the traffic study as to exactly what traffic the project contributes to the surrounding area. Although the traffic study states that 41,585 trips are generated by this site, that number reflects only three of the proposed six uses (entertainment/retail, hotel & office). The stadiums, exhibition site and youth stadium must also be included. An accounting of all the project related trips should be included in tables and reflected in the ICU calculations.
5. The traffic study submitted in conjunction with the DEIR states that the design weekday trip generation would occur on the day of an evening baseball game held in the new stadium. However, when looking at the Anaheim Transportation Analysis Model (ATAM) 2010 Land Use and Trip Generation Summary only 2000 trips are assumed for Anaheim Stadium. This number appears to be extremely low considering the large number of visitors the stadium experiences and should be changed to reflect the expected trips generated by the site. Rather than using a per acre rate, a per seat rate would be more accurate (i.e. $.2 \times 60,000 = 12,000$ ADT). The total trips derived from the proposed uses appear to be low when compared to similar uses in operation. A correlation between the trip rates for the proposed uses and the Institute of Traffic Engineers (ITE) rates should be included in the report.
6. The existing Katella Ave./Douglass Road intersection, used daily by approximately 250 county employees at the Katella Yard is not included in any aspect of the transportation and circulation analysis. This intersection is congested during all current sporting events at Anaheim Stadium or the Arrowhead Pond of Anaheim. The maps in the transportation

and circulation section fail to show this segment of Douglass Road south from Katella into the stadium.

7. Page 5.2-3 - include an analysis of the Katella/Douglass interchange in the traffic congestion analysis. Include this intersection on the associated maps.
8. On Page 5.2-14: In the discussion regarding parking, a number of assumptions and scenarios have been made to determine the parking requirements. The shared parking concept needs to be outlined in more detail. Even with no shared parking, the assumed rate of event attendees per vehicle calculates to 2.30. This rate needs to be substantiated considering current commuting practices.
9. It is indicated that there are 15,342 spaces available at the Arrowhead Pond. The Pond parking areas are generally full for Mighty Duck hockey games with an attendance of 17,200. This would indicate that the number of event attendees per vehicle may be less than 2.00. Also, the number of off-site parking spaces needed would exceed 30% of the overall parking requirements.

This is a very high percentage of off-site parking. It is stated that approximately 7,590 off-site spaces are available at office sites, etc.. Where are these locations? On Page 3-7, it is stated that it is not yet known which of the off-site parking facilities will be used. Is there any guarantee that all or most of these spaces will be available? Mitigation Measure 2-6 indicates that shared-parking agreements would have to be negotiated with the off-site property owners.

10. The feasibility of the shuttle bus operations (which may involve shuttling 20,000-25,000 event attendees) should be explained in much more detail. Any possibilities or opportunities to provide for more on-site parking should be fully examined and discussed.

FLOOD CONTROL ISSUES

11. Section 5.6.1 Environmental Conditions, Page 5.6-1. The Orange County Flood Control District (OCFCD) owns and maintains the Southeast Anaheim Channel (OCFCD Facility E12). Our records indicate that Southeast Anaheim Channel was constructed in 1965, and designed to convey a 25-year discharge. It is deficient in capacity by OCFCD's current standards.

Mitigation Measure 6-1 should be revised to require the project proponent to perform a hydrology and hydraulic study to ascertain the adequacy of Southeast Anaheim Channel to meet current OCFCD standards and criteria. As part of the planning of the Anaheim Sports Center development, necessary improvements to Southeast Anaheim Channel should be provided so that appropriate protection for the proposed development will be provided in accordance with OCFCD's current standards, in consultation with Environmental Management Agency (EMA)/Public Works/Flood Program Division.

12. In conjunction with the above recommendation, Mitigation Measure 6-2 should be revised to require as part of the proposed planning efforts for the Anaheim Sports Center, that the residual floodplain resulting from the

deficient Southeast Anaheim Channel be either removed by improving Southeast Anaheim Channel, or delineated and appropriately mitigated in accordance with Federal and County floodplain regulations, in consultation with EMA/Public Works/Flood Program Division.

- A. Exhibit 3-3 appears to indicate that the project proposes construction of commercial buildings above and adjacent to Southeast Anaheim Channel. An accurate exhibit should be prepared showing the alignment of Southeast Anaheim Channel and the proposed development. The facility is likely to experience structural damage resulting from these additional loads. As part of the planning for the proposed development, the project proponent should, in addition, address OCFCD's access and maintenance requirements along with the hydraulic and structural adequacy of the facility based on current OCFCD criteria.
 - B. Page 5.6-2
Additional storm drains tributary to Southeast Anaheim Channel are proposed as a part of the proposed new development. Improvements to this channel to allow proper drainage of the site may also be needed.
 - C. Page 5.8-54
Paragraph 2 states that no permanent structures will be constructed within the OCFCD easement. However, Exhibit 3-3 appears to indicate a retail center within the easement area. The same paragraph states that decreased runoff from the site will result in an adequate Southeast Anaheim Channel. The decreased flow rates shown on Page 5.8-54 are too small to significantly affect the capacity of the Southeast Anaheim Channel.
 - D. Exhibit 5.8-8 is not consistent with Figure 3-3.
 - E. Work within OCFCD Right-of-Way will require a permit from EMA/Building and Development Services/Public Property Permit Division.
13. Section 5.6.1 Environmental Conditions, Page 5.6.2 and 5.6.4. The proposed project lies within the floodplain of the Santa Ana River, which is expected to be eliminated only on completion of the Santa Ana River Project sometime in 1999. Even after the elimination of the Santa Ana River Floodplain, an additional residual floodplain resulting from the deficient Southeast Anaheim Channel is likely to remain.

WATER QUALITY ISSUES

- 14. The DEIR on Page 5.6-6 understates the potential water quality impacts of the project. Much of the pollution that appears on impervious surfaces is then washed via runoff into the nearest Receiving Waters derives from minute particulates from the breakdown of vehicular brake pads and tires, as well as leaks from standing vehicles. To the extent that the project is designed to increase the frequency of use of surface parking areas through a more constant use of the site, the additional pollution could be significant.
- 15. It is possible, especially if the landscaping for the project ultimately includes water features that periodically need to be drained, that the Regional Water Quality Control Board will decide the project requires an

individual National Pollutant Discharge Elimination System (NPDES) Permit for all potential long-term discharge, such as have been issued for Disneyland and Knott's Berry Farm.

16. Page 5.6-7, Water Quality, discusses mitigation measures for complying with the State NPDES program. These mitigations seem adequate to address project impacts.
17. The DEIR has no discussion of municipal NPDES compliance. A Storm Water Management Plan (SWMP) needs to be submitted and approved by the City, prior to issuance of building permits or grading permits, whichever comes first. The city as a co-permittee with the County, is obligated to comply with the NPDES municipal program. Appendix G of the Drainage Area Management Plan (DAMP) should be used as a guide for development of the WQMP. Proposed BMPs need to be listed in the WQMP. The WQMP addresses post-construction BMPs. It is up to the applicant to prepare the WQMP.

OPEN SPACE/RECREATION

18. Master Plan of Regional Riding and Hiking Trails/Class I Off-Road Bikeways:

- A. Exhibit 3-3: The "River Trail" should be identified as a "Regional Class I [paved off-road] Bikeway" and a separate "Regional Riding and Hiking Trail". These separate routes may also be referred to, respectively, as the "Santa Ana River Bikeway" and the "Santa Ana River Trail".
- B. Exhibits 3-5 and 3-6: The legend and map should include both the Class I Bikeway and the Riding and Hiking Trail. Exhibit 3-6 should show the proposed Class I bikeway connection from the Santa Ana River Bikeway to the Anaheim Stadium Metrolink/Amtrak station.
- C. Table 5.1-1: Under "Regional Planning Programs" (Orange County), include the Master Plan of Regional Riding and Hiking Trails. Under "Regional Transportation Planning Programs", include the Orange County Bikeway Plan and the OCTA/County of Orange Commuter Bikeways Strategic Plan.
- D. Page 5.1-5 (first paragraph, last sentence): The reference to the "City Riding and Hiking Trail" should be changed to identify the Regional Riding and Hiking Trail, including both the Santa Ana River Bikeway and the Santa Ana River Trail.
- E. Page 5.1-11: Change "trail" to "rail" (fourth paragraph, last sentence). Change "Santa Ana River Trail" to "Santa Ana River Bikeway" (last paragraph).
- F. Page 5.1-15: Under "Other Transportation Planning Programs", identify bikeway plans per #3 above (Orange County Bikeway Plan and the OCTA/County of Orange Commuter Bikeway Strategic Plan).
- G. Page 5.1-19, Circulation Element: Add bikeways to circulation system improvements (second sentence).

- H. Page 5.1-23, Anaheim Transportation Plans: This section should also address bicycling to the site, with a statement such as the following:

Bicyclists can be divided into three categories: those who will work at the project site, those who will visit the various attractions proposed at the site, and those who are out bicycling for recreational purposes and are just passing through. The main bikeway access to the site will be via the Santa Ana River Bikeway.

19. Santa Ana River Greenbelt Landscaping Enhancement:

It is recommended that the City of Anaheim require landscaping enhancements for the Santa Ana River Greenbelt area. Prior to the issuance of building permits, a landscaping plan for greenbelt area landscaping enhancements should be prepared by a licensed landscape architect or licensed landscape contractor taking into account City of Anaheim standard plans, adopted planned community regulations, scenic corridor and specific plan requirements as applicable. Coordination with the Manager, County of Orange, EMA/HBP-Asset Management Division is requested for submitted landscape plans.

KATELLA MAINTENANCE YARD ISSUES

20. The DEIR fails to acknowledge in any substantive way the existence of the EMA Katella Maintenance Yard which occupies approximately 13 acres adjacent to the proposed project. In December, 1995, press documents related to the Anaheim Sports Center indicated that this County (OCFCD) property is included as part of the Anaheim Sports Center development and identified the OCFCD parcel as "Gene Autry Western Village". Page 3-3 of the DEIR alludes to this potential use by renaming the existing Douglass Road as Gene Autry East.

Only Exhibit 5.1-1 identifies the existence of the EMA Katella Yard by designating the current land use of the EMA (OCFCD) site as public/utilities.


21. Specific comments include:

- A. General - Clarify if Gene Autry Western Village (on OCFCD site) is part of the Anaheim Sports Center project.
- B. Page 2-1 - The executive summary should identify the Katella Maintenance Yard with the listing of existing facilities east of the stadium (fitness club, sporting goods store etc.)
- C. Exhibit 3-3 - Indicate location of existing EMA maintenance yard.
- D. Page 4-3, Table 4-1 - Include the proposed 30 screen movie theatre on the existing drive-in site on Katella just east of the Santa Ana River and proposed entertainment complex on Douglass Road north of the Anaheim Pond in the cumulative impacts.
- E. Page 5.1-2 - Include the EMA Katella Yard in existing facilities in "surrounding land use".

- F. Page 5.2-15 - The report should recognize the City of Anaheim has an existing shared use agreement with EMA for parking on the Katella Yard site.

Thank you for the opportunity to respond to the DEIR. If you have any questions or need to contact us, please call Charlotte Harryman at (714) 834-2522.

Very truly yours,

A handwritten signature in cursive script that reads "George Britton".

George Britton, Manager
Environmental & Project Planning Division

CH:sf/gs
6022708173799

JAN 14 1997 12:00 FROM 010 020 0010 10 01142045280 1.01

GOVERNOR'S OFFICE OF PLANNING AND RESEARCH

1400 Tenth Street
Sacramento, CA 95814
(916) 445-0613



FACSIMILE TRANSMITTAL

DATE: 1-14-97

FACSIMILE
NUMBER: 714 254-5280

NUMBER OF
PAGES: X 3

TO: Greg McCafferty

AT: _____

FROM: Chris Belsky Fax: (916)323-3018

MESSAGE: Hard Copy to follow -

STATE OF CALIFORNIA—BUSINESS AND TRANSPORTATION AGENCY

PETE WILSON, Governor

DEPARTMENT OF TRANSPORTATION

DISTRICT 12
2501 PULLMAN STREET
SANTA ANA, CA 92701



January 8, 1997

Greg McCafferty
City of Anaheim
Planning Department
200 South Anaheim Boulevard # 162
Anaheim, CA. 92805

File: IGR/CEQA
SCH # 96111061

Subject: Anaheim Stadium Area Master Land Use Plan

Dear Mr. McCafferty:

Thank you for the opportunity to review and comment on the Anaheim Stadium Area Master Land Use Plan. The Proposed project will identify subareas or districts, establish land uses and zoning, development standards and design guidelines for each district, as well as, maximum development intensities. Specific development projects have not been identified as part of the MLUP. Caltrans District 12 is a responsible agency and has the following comments for your consideration.

The project will impact operations of the Santa Ana (I-5) and the Orange Freeway (SR-57). A traffic study should be prepared which would include existing and future average daily traffic volumes, traffic generation including peak hour, traffic distribution, intersection capacity utilization analysis along arterial roads and state freeways which might be impacted. Consideration should be given to the cumulative effects that development in the area will have on the transportation system. Further, the EIR should identify the mitigation measures and the funding sources which would be used to implement those measures.

In addition, coordination with the I-5 construction staging needs to be taken into account as there will be closures, detours within the area.

Greg McCafferty
January 8, 1997
Page 2

We appreciate the opportunity to comment on this document. If you have any questions concerning these comments please contact Aileen Kennedy on (714) 724-2239.

Sincerely,



Robert F. Joseph, Chief
Advance Planning Branch

cc: Tom Loftus, OPR
Ron Helgeson, HDQTRS Planning
Tom Persons, HDQTRS Traffic Operations
Gary Slater, Project Development
Tim Buchanan, Traffic Operations, North
Judy Heyer, Public Transp. and System Planning

APPENDIX B

Public Services and Utilities Technical Report

**Anaheim Stadium Area
Master Land Use Plan
DRAFT EIR**

**PUBLIC SERVICES AND UTILITY
TECHNICAL REPORTS**

Prepared for:

**Michael Brandman Associates
15901 Red Hill Avenue, Suite 200
Tustin, CA 92780-7318**

Prepared by:

**IWA Engineers
600 City Parkway West, Suite 300
Orange, CA 92868**

SEPTEMBER 1998

**Anaheim Stadium Area Master Land Use Plan
DRAFT EIR**

**PUBLIC SERVICES AND UTILITY
TECHNICAL REPORTS**

LIST OF REPORTS

A. LAND USE

I. WATER SUPPLY REPORT

**II. WASTEWATER COLLECTION/
SANITARY SEWER SERVICE REPORT**

III. DRAINAGE/STORM DRAIN REPORT

IV. POWER SUPPLY REPORT

**Anaheim Stadium Area
Master Land Use Plan
DRAFT EIR**

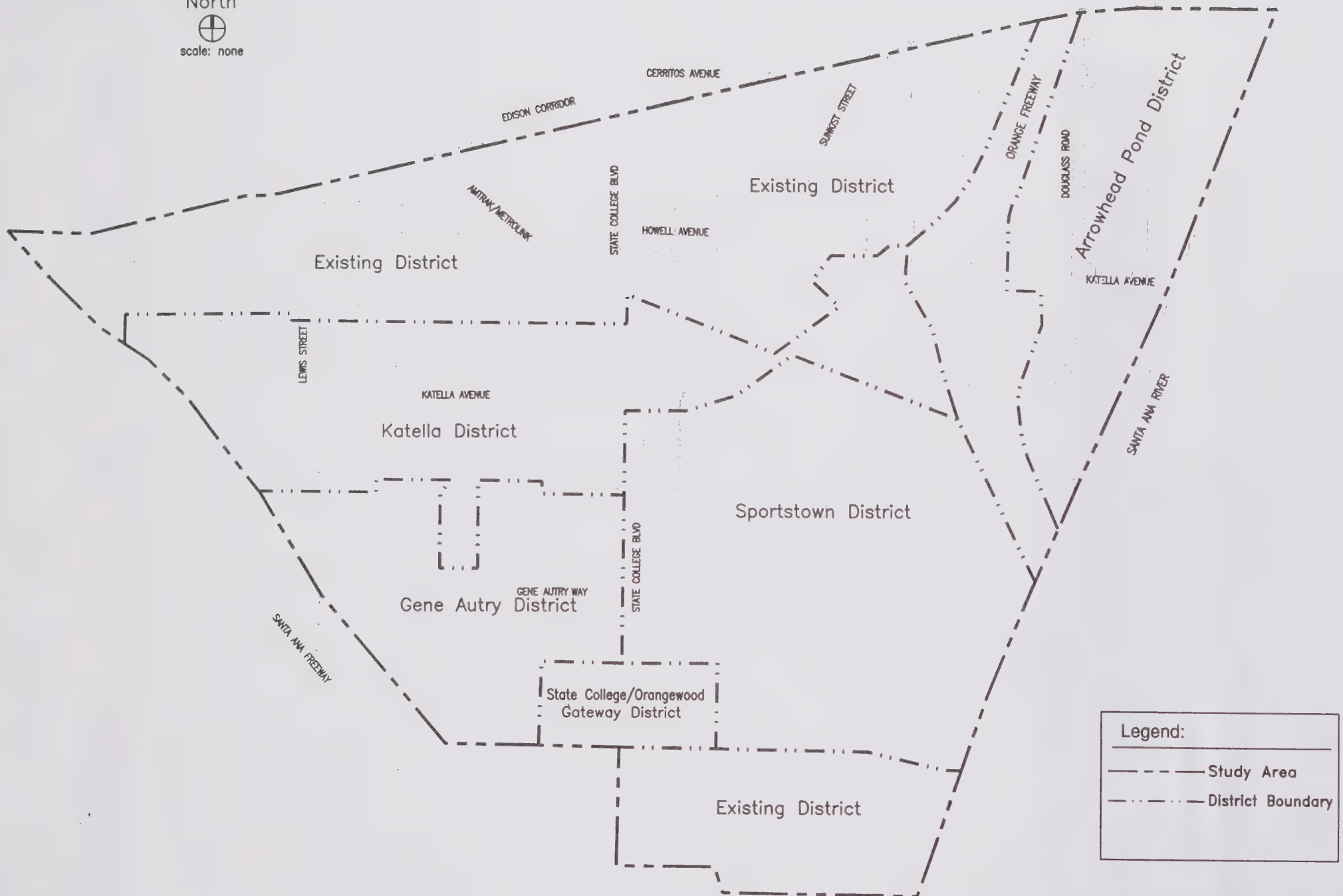
A. LAND USE



A. Introduction

The Anaheim Stadium Area Master Land Use Plan (ASAMLUP) area is located in the City of Anaheim. The project location is shown in the following exhibits as excerpted from the EIR. Exhibit A-1 shows the development area and the district breakdown. Table 3-1 shows the maximum allowable development by district. These exhibits and tables makeup the basis for this Technical Report.

North

 scale: none



Legend:	
	Study Area
	District Boundary

District Plan ANAHEIM STADIUM AREA MASTER LAND USE PLAN EIR

Exhibit A-1

TABLE 3-1
MAXIMUM ALLOWABLE DEVELOPMENT BY MLUP DISTRICT

DISTRICT	USE	EXISTING SQ. FT.	PROPOSED PROJECT SQ. FT.	TOTAL ALLOW. SQ. FT.
Existing District	Industrial	3,358,374	126,862 126,862	3,485,236
Gene Autry District	Office Retail	806,538	116,141 116,140 232,281	1,038,819
Arrowhead Pond District	Office Retail Hotels	1101215*	356,484 71,297 166,359 594,140	1,695,355
Katella Corridor District	Industrial Office Retail Hotels	2,934,392	(216,210) 1,220,322 248,584 790,949 2,043,645	4,978,037
Gateway District	Industrial Office Retail Hotels	537,043	(401,955) 178,338 16,005 34,295 (173,317)	363,726
Sportstown District	Entertainment Retail		0	1,700,000
TOTAL			2,823,611	13,261,173
* Includes a 982,000 square foot mixed use center (Anaheim Corporate Center) currently being entitled under a separate environmental document. Source: Spectrum Group, July 1998				

**Anaheim Stadium Area
Master Land Use Plan
DRAFT EIR**

I. WATER SUPPLY REPORT

I. WATER

This section addresses the water distribution system serving the Anaheim Stadium Area Master Land Use Plan (ASAMLUP) re-development area outlined in Exhibit I-1. The Sportstown Anaheim District is not a part of the project area.

Environmental Conditions

Regional Setting

Water

The City of Anaheim Public Utilities Department, Water Division, provides water service to the ASAMLUP re-development area. The majority of the City's water (approximately 70 percent) is pumped from the local groundwater basin. The water for the local groundwater basin is supplied through storm water infiltration and recharge basins. As back up for the wells, the City purchases water from the Metropolitan Water District (MWD).

MWD is a wholesale water agency responsible for providing supplemental water (water from a source other than local groundwater and surface water) to water agencies within its service area. MWD supplies imported water to Southern California from northern California and the Colorado River. MWD contracts for this water from the State Water Project (SWP). As a wholesale agency, MWD finances, constructs, and operates the pipelines and other facilities to transport the State water from its source to the wholesaler's area of service. Water purveyors, such as the City of Anaheim Public Utilities Department, Water Division, contract with MWD for water. Purveyors transport the water from the wholesale agency's storage facility or from turnouts (connection points) on the wholesaler's distribution pipeline and provide water service to their retail clients.

Well No. 33, the closest source of groundwater serving the ASAMLUP area, has operated for 30 years at the intersection of Stadium Way and Stadium Center Drive. The well produces an average of 1,080 gallons per minute and is 469 feet deep. A connection to the MWD system near the intersection of Cerritos Avenue and Lewis Street provides back-up service for the well.

Well No. 33, the existing MWD connections, and the distribution lines are capable of supplying the existing maximum day demands and peak hour demands to the ASAMLUP area (per Water Department staff). However, new wells will be necessary in the future in order to compensate for diminishing production from older wells serving the area.

Of the domestic water used in north Orange County, 70% is currently derived from the

groundwater basin managed by Orange County Water District (OCWD). OCWD prepared a Groundwater Management Plan (GWMP) in 1994. The GWMP defines goals for the next 20 years, such as increasing basin water supplies, protecting and enhancing water quality, and improving basin management. The purpose of implementing the GWMP is to increase reliance on local sources rather than on less dependable imported water. OCWD believes the use of local supplied water could increase from the current level of about 70% to 90% by 2010 if all baseline and potential projects envisioned in the GWMP are completed. The benefits of this plan are to reduced dependency on imported supplies, protection from drought and shortage, and increased use of lower cost sources.

Water Quality

Water pumped from Santa Ana River Basin wells is naturally filtered in the underlying sand, rock strata and soil. This water is generally delivered directly into the transmission and distribution mains. Groundwater pumped into the City's reservoirs is disinfected to assure sanitary quality. Treated water purchased from the MWD of Southern California is filtered and disinfected at MWD's Diemer treatment plant in Yorba Linda. Both untreated Colorado River water and State Project water purchased from MWD is received at the City's Walnut Canyon Reservoir via connections with MWD's Santiago Lateral. The water is, in turn, filtered and disinfected at the City's August F. Lenain Filtration Plant before distribution. This treatment process results in water quality which meets or exceeds drinking water standards.

Analysis for organic chemicals is routinely performed on all the City's drinking water wells and treatment plants. Nineteen wells out of thirty wells tested show at least trace amounts of contamination with volatile organic chemicals. Two of these wells are out of service because they exceed the maximum contaminate level (MCL) for trichloroethylene ("TCE"). Thirteen wells show trace amounts of freon compounds and eleven wells have trace amounts of herbicides. Eighteen wells show trace amounts of other organic chemicals. These wells remain in operation as the trace amounts continue to meet drinking water standards.

Organic chemicals produced during the disinfection process are routinely monitored. Currently, the rolling quarterly average concentration of Total Trihalomethanes 's (TTHM's) is 37.8 micrograms per liter (up/L). The current MCL for TTHM's is 100 ug/L.

Past agricultural practices have left their mark in the form of contamination of the upper aquifers with mineral salts such as nitrates. Degradation of ammonium compounds from fertilizers produce nitrates which are regulated at a MCL of 45 milligrams per liter (mg/L), same as parts per million (ppm). Over the years, old shallow wells producing from the upper aquifer have been replaced with new deeper wells producing a higher quality water.

One old well was recently taken out of service since it approached the nitrate MCL. The City is participating with the Orange County Water District in researching new treatment techniques to mitigate nitrate contamination and is actively pursuing a replacement program of old shallow wells with new deeper ones.

City water is sampled and tested over 2,500 times each month. Since 1966, the City has operated its own water quality laboratory to facilitate constant surveillance of water quality as it is being produced, stored, distributed and finally consumed at the tap. The City's water quality laboratory takes samples of water from wells and distribution system and performs more than 2000 tests monthly. The City's water quality monitoring program is staffed and operated in accordance with Title 22, Chapter 15, of the California Code of Regulations. To date, the City has, and continues to supply, drinking water meeting all Federal, State and County drinking water regulations.

Reclaimed Water

In an attempt to develop a reclaimed water supply for northern Orange County, OCWD and County Sanitation Districts of Orange County (CSDOC) are jointly designing the Orange County Regional Water Reclamation Project (OCR Project). This project will produce reclaimed water, but its primary dedication will be groundwater recharge from OCWD's existing recharge facilities in the City of Anaheim. It is expected the OCR Project will produce 50,000 acre-feet per year by the year 2000 and additional 25,000 acre-feet per year by the years 2010 and 2020. The proposed pipeline alignment is along the Santa Ana River Channel and will extend from the OCWD/CSDOC facilities in Fountain Valley to the OCWD recharge facilities in Anaheim.

CSDOC currently reclaims up to 15 mgd of secondary treatment water from the Fountain Valley Plant that is purified at the Orange County Water District Factory 21. The purified water is injected into the groundwater table to block seawater intrusion. CSDOC also supplies industrial users with reclaimed water. Additionally, CSDOC has proposed plans to reclaim an additional 15 mgd for industrial use and landscape irrigation.

Local Setting

The ASAMLUP area is serviced by water mains below the City's roadway system. The water mains vary in size from 6-inch to 24-inch. These service lines are supplied with water by Well No. 33 and Well No. 19. Well No. 33 is located on the property of Anaheim Stadium whereas Well No. 19 is located off of Lewis Street near Ball Road. The water distribution system in the area has recently been upgraded to a single pressure zone of 335 foot static hydraulic grade line (HGL).

Environmental Impacts

Projected Consumption

Table I.1 shows the projected average daily water demand for the proposed project. Total water consumption for the ASAMLUP area will consist of domestic demands and fire demands.

From the analysis outlined in Table I.1, Projected Average Daily Water Demand, the existing average day domestic water demand is 1.315 million gallons per day (mgd) for the project area and the Sportstown area. The total project net demand for the same is estimated at 2.411 million gallons per day. The increase from the project only is 0.687 mgd. The existing systems servicing the site are capable of supplying the projected maximum day demands to the ASAMLUP area base on the study prepared in 1985 by the City of Anaheim. However, due to diminishing production from older wells in this area this conclusion may change with time.

A new well will be necessary in order to compensate for diminishing production from older wells serving this zone. Improvements to the conveyance infrastructure in the area of the proposed project will also be necessary to serve the proposed project.

Fire Flow

The adequacy of fire flow protection for a given area is based on required fire flow, response distance from existing fire stations, and the City of Anaheim Fire Department's judgment of needs in an area. Required fire flow is closely related to land use. The quantity of water necessary for fire protection varies with the type of development, life hazard, occupancy, and the degree of fire hazard. According to the Anaheim Fire Department, improvements to the water system in this area will not be required as the system presently can provide 6,000 gpm for the 2-hour fire incident at 20 psi. According to the City of Anaheim Fire Department, 6,000 gpm is required for fire flow in non-sprinkler buildings. For buildings with sprinkler systems, the requirement is 4,000 gpm. Proposed buildings will be designed with sprinklers for fire protection. Fire flows have not been considered in the water demand calculations. Because fire flow demands are intermittent and variable, it is standard industry practice not to consider fire flow in demand calculations. In evaluating the water system, the City will combine the fire flows to the maximum day demand flows to determine the pipe sizes.

Project Design Features

With development of the ASAMLUP, new connections to the existing system will be made.

With the new connections, particular piping systems in the surrounding streets will be upgraded. Development of the proposed project will also require project specific improvements and inclusion of previously contemplated City improvements. These previously contemplated improvements are included in the City of Anaheim Five-Year Water System Plan. The following improvements are included in the development of the ASAMLUP are excerpted from the City Five Year Water Master Plan (Anaheim Stadium Business Center Improvements Projects Section):

Orangewood Avenue 16" main - Construct supply mains in Orangewood Avenue from Manchester Avenue to State College Boulevard. The improvement consists of 16" main within 30" casing across the right-of-way of the I-5 freeway and water main outside the freeway right-of-way. Construction is scheduled for the year 2003/2004.

Katella Avenue 16" main - Construct supply mains in Katella Avenue from Manchester Avenue to Lewis Street. The improvement consists of 16" water main outside the freeway right-of-way. This construction is scheduled for 2003/2004.

Well No. 45 - Construct deep domestic water well near State College Boulevard and Stadium Way. This construction is scheduled for 2003/2004.

The City will prepare its own hydraulic network analysis for this proposed system with the addition of the mitigation measures below.

Methodology

This study identifies the potential impacts on the water supply and distribution system resulting from the build-out of the ASAMLUP. Based on specific generation factors for water service (see Table I.1), the future water demand is estimated for the ASAMLUP project.

Generally, water demands are approximately 10 to 20 percent higher than sewer demands. For the purposes of this report and due to the unique sewer flow characteristics of a stadium this generalization does not apply to this report. This demand differs greatly from the sewer demand due to the different analysis techniques. For the water analysis an average day demand was used and for the sewer peak flows were calculated. For further discussion of sewer methodology please refer to the sewer section.

Given the existing capacity of the water system and projected future demand, an assessment was made of the water system impacts. Where project impacts exceed the

supply capacity of the existing system, specific improvements have been recommended in this section to mitigate those impacts.

The water distribution and supply system was evaluated by determining existing physical features and capacities of the system. Information was obtained from City of Anaheim as needed to define the existing systems capacities to deliver water to the property. The future maximum water demand flows were determined based on water generation factors from building square footage and specific use of buildings. Pipelines were sized to maintain flow velocities between 3-8 feet per second (fps). Meetings were held with the City of Anaheim regarding the proposed improvements and the results are included in this report.

Mitigation Measures

Mitigation Measure No. 1 - New Well No. 45 will be installed to replace the existing Well No. 33. This well will serve as a major source of supply for the ASAMLUP. This new well will be installed near the intersection of Katella Avenue and the proposed ASAMLUP access from Katella Avenue (refer to Exhibit I-2). The well is expected to produce in the vicinity of 3,000 gallons per minute and will be approximately 1400' deep.

Mitigation Measure No. 2 - The existing Well No. 33 will be removed.

Mitigation Measure No. 3 - A new 16-inch pipeline will be constructed in State College Boulevard from Well No. 45 to the existing 18-inch line at the intersection of Katella Avenue and State College Boulevard. This new pipeline will complete a loop with the sites proposed and surrounding system.

Mitigation Measure No. 4 - Water conservation will be an important part of project, and it will be achieved through numerous measures intended to reduce water consumption. Among the measures to be implemented with the project are the following:

- Use of water-conserving landscape plant materials wherever feasible;
- Use of vacuums and other equipment to reduce the use of water for wash down of exterior areas;
- Low-flow fittings, fixtures and equipment including low flush toilets and urinals;
- Use of self-closing valves for drinking fountains;
- Use of efficient irrigation systems such as drip irrigation and automatic systems

which use moisture sensors;

- Infrared sensors on sinks, toilets and urinals;
- Low-flow shower heads in hotels;
- Infrared sensors on drinking fountains;
- Use of irrigation systems primarily at night, when evaporation rates are lowest;
- Water-efficient ice machines, dishwashers, clothes washers, and other water using appliances;
- Cooling tower recirculating system;
- Use of low flow sprinkler heads in irrigation system;
- Use of waterway re-circulation systems;
- Provide information to the public in conspicuous places regarding water conservation.
- Use of reclaimed water for irrigation and washdown when it becomes available.

In connection with submittal of landscape and building plans, the applicant shall identify which of these measures have been incorporated into the plans.

Mitigation Measure No. 5 - Prior to issuance of the first building permit, the applicant will provide engineering studies, including network analysis, to size the water mains for ultimate development within the project including detailed water usage analysis and building plans for Public Utilities Water Engineering review and approval in determining project water requirements and appropriate water assessment fees.

Significant Unavoidable Adverse Impacts

Implementation of the project design features and mitigation measures listed above will reduce the impact on the water supply system to a level not considered significant.

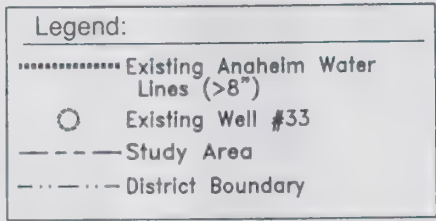
Cumulative Impacts

During periods of drought, regional water demand may be greater than natural replenishment of water reserves, resulting in a drawdown of stored water captured for water supply use. During such periods, increased water demands from the project will contribute to such drawdown as will any and all other future increases in regional water demand. While this potential impact may be cumulative during drought periods, replenishment of water supplies when conditions return to normal or during wet periods will eliminate any such impacts. This impact will be further mitigated by the institution of the OCR Project that will supply reclaimed water to the Anaheim area thus reducing the need for potable water supplies.

Sources:

City of Anaheim
Public Utilities Department
1999-2003 Five-Year Water System Plan
Prepared By: Water Services of Anaheim

City of Anaheim
Public Utilities Department
Water Engineering Division
Stadium Area Study (February 1985)



ANAHEIM STADIUM AREA MASTER LAND USE PLAN EIR

IWA ENGINEERS
600 The City Parkway West, Suite 300
Orange, CA 92868
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TABLE I.1

PROJECTED AVERAGE DAILY WATER DEMAND

Component	Unit	Factor	Consumption Rate (gpd/sf)	Water Demand (million gallons per day)
Existing Land Use				
Sportstown Area (1)				
1. Anaheim Stadium	45,000	SEATS	4	0.180
2. Exhibition Center	150,000	SF	0.0831	0.012
Subtotal				0.192
Other Areas (2)				
1. Industrial	5,895,786	SF	0.0831	0.490
2. Office	2,120,539	SF	0.24	0.509
3. Retail	427,797	SF	0.12	0.051
4. Hotels (400 ROOMS) (3)	293,440	SF	0.245	0.072
Subtotal				1.122
Existing Demand				1.315
Proposed Land Use				
Sportstown Area (1)				
1. Entertain/Retail	750,000	SF	0.0831	0.062
2. Office	900,000	SF	0.24	0.216
3. Hotel #1 (350 ROOMS) (3)	385,000	SF	0.164	0.063
4. Hotel #2 (150 ROOMS) (3)	165,000	SF	0.164	0.027
5. Youth Sports Center	750	SEATS	5	0.004
6. Parking (Onsite) (4)	14,000	SPACES	1.8	0.025
Parking (Offsite) (4)	6,350	SPACES	1.8	0.011
Subtotal				0.409
Other Areas (2)				
1. Industrial	(491,303)	SF	0.08	(0.039)
2. Office	1,871,285	SF	0.24	0.449
3. Retail	452,026	SF	0.12	0.054
4. Hotels (1240 ROOMS) (3)	991,603	SF	0.225	0.223
PROPOSED NET PROJECT INCREASE				0.687
Total Additional Water Demand				1.096
Total Net Water Demand				2.411
				(GPM) 1,674
NOTES				
1) Adapted From Anaheim Sports Center EIR, January 1996				
2) Demand Rates per City of Anaheim Criteria, September 1998.				
3) Hotel Rate Based on 180 gpd/room.				
4) Parking Lot Rate Based on 2 AF/AC/YR.				

**Anaheim Stadium Area
Master Land Use Plan
DRAFT EIR**

**II. WASTEWATER COLLECTION/
SANITARY SEWER SERVICE REPORT**

II. WASTEWATER COLLECTION/SANITARY SEWER SERVICE

This section addresses the wastewater collection system serving the Anaheim Stadium Area Master Land Use Plan (ASAMLUP) re-development area as outlined in Exhibit II-1.

Environmental Conditions

Regional Setting

The City of Anaheim local sanitary sewer system serves the ASAMULP project vicinity, and is a tributary to the County Sanitation District of Orange County (CSDOC) District 2. The entire CSDOC system encompasses 439 square miles. CSDOC services approximately 86,000 acres and includes all of the Cities of Placentia, Villa Park, and Yorba Linda in their entirety and portions of the cities of Anaheim, Brea, Fullerton, Fountain Valley, Garden Grove, Orange and Santa Ana. In addition numerous unincorporated islands of the County of Orange are included.

Wastewater from the City sewer system is conveyed to the County trunk and interceptor sewers to regional treatment and disposal facilities. The CSDOC sanitary sewers serving the ASAMLUP area are the Newhope-Placentia Trunk, the Olive Sub-trunk, the Orangewood Diversion Sewer and the Santa Ana River Interceptor (SARI) line. Flows go to the District's Treatment Plant No. 1 in Fountain Valley. Plant Number 1 has a total capacity of 60 million gallons per day (mgd). The Fountain Valley plant, along with Treatment Plant Number 2 in Huntington Beach, treats wastewater from 24 Orange County cities and unincorporated County areas. Together the treatment plants process more than 270 mgd of wastewater. Approximately 80 percent of the total effluent are generated by residential uses. The balance comes from industrial or commercial sources. Treated effluent is discharged into the Pacific Ocean. CSDOC also plans to expand Plant Number 1 in Fountain Valley to increase their processing capacity to 120 mgd of wastewater.

CSDOC currently reclaims up to 15 mgd of secondary treatment water from the Fountain Valley Plant, which is purified at the Orange County Water District (OCWD) Factory 21. The purified water is injected into the groundwater table to block seawater intrusion and supplies reclaimed water for industrial and irrigation uses. CSDOC has proposed to reclaim an additional 15 mgd for industrial use and landscape irrigation. In the future CSDOC plans to reclaim up to 100 mgd.

Local Setting

The ASAMULP re-development area is served by two agency's sewer collection systems. The City of Anaheim has a collection system of gravity sewer lines that service the area that are tributary to the County's system. CSDOC has three major gravity trunk sewers and a gravity diversion sewer in the ASAMULP area. City sewers within the South Central Area Basin (generally west of State College Boulevard) are tributary to the South Anaheim Area Interceptor or the Euclid Trunk (via the Katella Avenue Relief sewer) approximately 1.8 miles west of the project area. Exhibit II-1 shows the locations of the lines within the project area. The total acreage of the ASAMULP re-development area is 713 acres.

City Sewer Collection System (Previously Studied) - The major sewer basins and associated sewer lines are as follows:

1. Stadium Crossings System - In the northern portion of the development area along State College Boulevard from the Edison Easement to Katella Avenue, there exists a 15-inch gravity sewer line. Also, an 8-inch gravity sewer line exists north of the center line in Katella Avenue that enters the same manhole as the above 15-inch line prior to entering the County Sanitation trunk sewer line in State College Boulevard. This 8-inch line runs easterly for about 440 feet along Katella Avenue then runs south to Anaheim Stadium property serving the new Tinseltown Project.

Tinseltown Sewer System – An existing 8-inch sewer line starts at the State College Boulevard and Katella Avenue intersection. It runs upstream along Katella Avenue north of the center line for about 440 feet, then south for 50 feet, then easterly for 480 feet to its end. Somewhere along the last 480-foot leg, a new 8-inch lateral runs south to serve the new Tinseltown Project. This sewer basin resides within the stadium property that has a westerly limit at the eastern property line of several small parcels located at the southeast corner of State College Boulevard, northerly limit at Katella Avenue, easterly limit at the west side of the Stadium, and southerly limit along the north side of the Stadium.

Sportstown Sewer System - This sewer basin is within the stadium property that is tributary to the County's old Newhope-Placentia trunk line in State College Boulevard by a 15-inch line extending from the west side of Anaheim Stadium westerly to the above mentioned County's trunk in State College Boulevard. Katella Avenue, Tinseltown, and several small commercial parcels (southwest corner of State College/Katella) borders Sportstown on the north, State College Boulevard borders the west, Anaheim Stadium on the east, and the main entrance drive to the

stadium on the south. Portions of the Existing, Katella, and Sportstown Districts are tributary to this basin. This existing 15-inch City sewer connecting to the CSDOC system at State College Boulevard runs under the County's Southeast Anaheim Channel to connect into the County's old Newhope-Placentia trunk sewer

2. South Central Area Basin – A City sewer line in Katella Avenue begins at about State College Boulevard and continues westerly towards the West End of the Stadium development area. This line ranges in size from 18-inch to 21-inch in diameter within the project area. The 15-inch and 8-inch City sewer lines in State College Boulevard were previously connected to this sewer until a direct connection was made to the CSDOC system.

This area was previously studied in the South Central Area Sewer Deficiency Study, 2nd Revision, January 1993 and is herein referred to as the South Central Area Basin. The westerly limits of this basin are beyond this project's boundaries near Walnut and Ninth Streets. The northerly limit is also beyond this project's area (south of Ball Road) except at the AT&SF/MetroLink right-of-way (ROW). The easterly limit is State College Boulevard and the southerly limit is approximately one block south of Gene Autry Way within this project's area. Portions of the Existing, Katella, and the Gene Autry Districts are tributary to this basin.

3. Orangewood Avenue Sewer System - Since the County's Newhope-Placentia trunk sewer runs in Orangewood Avenue from State College Boulevard to Lewis Street, all City sewers consisting of short legs/runs at Santa Cruz Street, Anaheim Boulevard, and Cypress Street tie directly into the County Orangewood Avenue trunk.

County Sewer Collection System - The major trunk lines in the study area are the Orangewood Diversion Sewer, Newhope-Placentia Trunk, the Olive Sub-trunk, and the Santa Ana Regional Interceptor (SARI). A description of these trunk lines and major sewer basins associated with these sewers are as follows:

1. Orangewood Diversion Sewer - The old County Newhope-Placentia Trunk at the north end of the stadium development area flows southerly within State College Boulevard from the Edison Easement to Orangewood Avenue, then easterly along Orangewood Avenue to the County SARI. The size of the line within this reach ranges in size from 36-inches to 42-inches in diameter. Flows north of the State College Boulevard/Orangewood Avenue intersection (in the old alignment of the Newhope-Placentia line) have been diverted easterly by the CSDOC Orangewood

Diversion Sewer. The CSDOC Orangewood Diversion Sewer was built to alleviate a deficiency in the Newhope-Placentia Trunk identified by CSDOC in their 1991 Master Plan. The 48-inch Orangewood Diversion Sewer flows easterly in Orangewood Avenue between State College Boulevard and the SARI crossing the Santa Ana River. The old Newhope-Placentia Trunk runs upstream in State College Boulevard to serve the City of Fullerton at Orangethorpe Avenue.

2. Newhope-Placentia/Orangewood Basin - At the current upstream end (Orangewood Avenue and State College Boulevard), the Newhope-Placentia Trunk runs west past the western boundary of the stadium area to Lewis Street (west side of the Santa Ana Freeway), then south down Lewis Street through the City of Orange to the County SARI.

The properties along Orangewood Avenue west of State College Boulevard are tributary to the Newhope-Placentia Trunk via 8-inch to 12-inch City sewers in and along the avenue. This city sewer basin's northerly limit is generally one row of properties south of Gene Autry Way (west of State College Boulevard), the southerly limit is the South City Limits boundary along Orangewood Avenue, the easterly limit is State College Boulevard, and the westerly limit is the Santa Ana Freeway (I-5).

3. Olive Basin - The upstream end of the Olive Subtrunk Basin starts near Katella Avenue and the Santa Ana River at the northeastern end of the development area and continues in a westerly direction along Katella Avenue to Howell Avenue, then northwesterly along Howell Avenue to intersect with the old Newhope-Placentia Trunk at State College Boulevard. The sizes of the trunk line ranges from 24-inches to 30-inches in diameter.

Properties within this basin are carried to the Olive Sub-trunk by City sewers in Page Court, Sunkist Street, Sinclair Street, and Douglass Road. The westerly limits of the basin is generally the west side of the properties fronting Sunkist Street and Page Court, the Southeast Anaheim Channel ROW. The northerly limit is beyond the project area near Ball Road including the golf center north of Ball Road. The easterly limit is the Santa Ana River and the southerly limit is the AT&SF/MetroLink ROW. Portions of the Arrowhead Pond, Existing, and Katella Districts are tributary to this basin.

Environmental Impacts

Projected Consumption

Table II.1 delineates the project's average dry weather and peak dry weather flows (ADWF & PDWF respectively) for the proposed project. City master planning criteria was utilized for the areas outside of the Sportstown District (previously studied in the Anaheim Sports Center EIR).

The planned development for the ASAMLUP area is consistent with the City's General Plan land use. The stadium development area is proposed to include industrial, office, retail, and hotel land-uses. The table below shows the land-use breakdown square footages for the project area. Specific land-use area locations were not available.

MAXIMUM ALLOWABLE DEVELOPMENT			
Land Use	Existing Development (square feet)	Proposed Changes (square feet)	Total (square feet)
Industrial	4,135,154	(491,303)	3,643,851
Office	3,881,171	1,871,285	5,752,456
Retail	427,797	452,026	879,823
Hotels	293,440 (400 rms)	991,603 (1240 rms)	1,285,043 (1640 rms)
Sub Total	8,737,562	2,823,611	11,561,173
Sportstown District	0	1,700,000	1,700,000
Total			13,261,173

Project Design Features

Development of the proposed project will require project specific improvements and inclusion of previously determined City improvements. These previously proposed sewer improvements are included in the South Central Area Sewer Deficiency Study and the Anaheim Sports Center EIR. The following improvements are included in the development of the ASAMLUP derived from the South Central Area Sewer Deficiency:

Anaheim Boulevard Sewer - Construct replacement sewers in Anaheim Boulevard from AT&SF/Metrolink right-of-way to Claudina Street. The improvement consists of 10 to 12-inch sewers along the right-of-way of the I-5 Freeway.

Lewis Street Sewer - Construct parallel 8-inch sewers in Lewis Street from 330-feet south of Katella Avenue to Katella Avenue.

Gene Autry Way Sewer - Construct 10-inch replacement sewers in Gene Autry Way from about 300 feet west of Betmor Street to Lewis Street.

Lewis Street/Anaheim Boulevard Sewer - Construct 10-inch replacement sewers in Anaheim Boulevard along I-5 freeway right-of-way. Connect Gene Autry Way sewers to divert flows from the 8-inch sewer in Lewis Street.

The sewers contemplated with the Anaheim Sports Center EIR are considered on-site improvements and are not included herein.

The City is currently preparing sewer deficiency studies for the areas east and west of State College Boulevard to supplement the Technical Appendix of the Stadium Area EIR. The sewer improvements recommended in these studies must be incorporated as mitigation measures for the Stadium Area EIR.

Methodology

Information was obtained from the City of Anaheim Planning and Engineering staffs and CSDOC's staff regarding their respective systems. The above agencies provided sewer reports that were reviewed to determine any significant changes in land use at total build-out condition. This was done to determine if this Stadium Area development has an impact on the existing sewer collection system greater than previously assumed.

Below is a list of the reports obtained and reviewed within or near to the development area.

- 1) Sanitary Sewer Capacity Study, Stadium Crossings Anaheim, March 18, 1998, EKN Engineering.
- 2) South Central Area Sewer Deficiency Study, 2nd Revision, January 1993.
- 3) Anaheim Plaza and Remaining Central Areas Sewer Deficiency Study, December 1993.
- 4) Sewer Capacity Investigation for McKesson Bottling Plant, March 6, 1997.
- 5) Tinseltown Sewer Study, March 19, 1998.

- 6) County Master Plan of Sewers, Land Use Flow Summary, 1991.
- 7) Anaheim Sports Center EIR, 1996.

The City is undergoing a process of preparing sewer deficiency studies for the entire Stadium Area portion of the City. These studies are intended to identify existing and expected deficiencies in the City's sewer system and develop costs for eliminating those deficiencies. Currently there isn't a comprehensive study covering the project area east of State College Boulevard. A report, following the City's format, is being prepared for this document and will be included in the Technical Appendices.

Sanitary Sewer Capacity Study, Stadium Crossings Anaheim, March 18, 1998 analyzed the available capacity of the 15-inch and 8-inch sewer lines flowing in State College Boulevard and Katella Avenue. The Stadium Crossings sewer basin is tributary to the City facility in State College Boulevard.

Portions of the land use for the ASAMLUP re-development area are similar to what were used in the Stadium Crossing Analysis report. Tributary areas were defined, land use and wastewater generation rates assigned to determine flows, and their respective capacities. The Stadium Crossings report concluded that for its build-out condition, the 15-inch and 8-inch sewer lines had adequate capacity. This conclusion was confirmed herein as well, especially since several tributaries are now connected to CSDOC's Olive Sub-Trunk that were shown to be tabled to the City's sewer lines in State College Boulevard.

South Central Area Sewer Deficiency Study, 2nd Revision, January 1993 evaluated an area extending to Vermont Avenue to the north, Orangewood Avenue/City Limit to the south, Ninth Street to the West and State College Boulevard to the East. Portions of the study area overlap into the ASAMLUP Area. The study analyzed the total build-out condition whose land use and density factors were obtained from the City's General Plan dated April 1991. In the proposed Stadium Development Area, the report identified deficient pipelines in the vicinity of the I-5 Freeway and Lewis Street. These sewers have been or in the process of being improved as part of the I-5 Freeway improvements. Since the land use intensity is proposed to be higher in the ASAMLUP area than what was assumed in the sewer deficiency study, a land use/wastewater flow comparison study was done to determine impacts to the City sewers. This study is included in the Technical Appendix to this report.

County Master Plan of Sewers, Land Use Flow Summary, 1991 computer printouts, with land use and flow data were obtained. The printouts showed a breakdown of various

tributary areas with a description of the land uses and acreage from which wastewater flow data was generated.

The ASAMULP re-development area is tributary to the following County areas:

- 1) Olive Trunk - OL 9, OL 8, OL5, and OL2.
- 2) SARI - SA 8
- 3) Newhope-Placentia Trunk - NP 33, NP35 and NP36.

The Arrowhead Pond lies within the District's Area OL 9. The County identified this area as 75% medium residential and 25% office commercial. The ASAMLUP proposed overlay is for 100% office and commercial. This has a lower waste generation factor than the residential factor used by the County. However, both have not taken into consideration peak flows generated for an arena facility that usually peaks at a 2-3 hour time period rather than over a 24-hour duration. An increase in flows should be expected as the existing 10-inch needs to be upgraded to a 12-inch line.

Portions of Area OL 5 are within the Existing and Katella Districts. The County identified the District area as 34% medium residential, 63% office commercial, and 3% industrial. The proposed Districts are within the southernmost area of OL 5. Since residential land uses exist within the northern section of this area as well, the proposed re-development (of office, commercial and industrial land use) of this site is expected to be similar to what the County had used previously.

Area OL 2 overlaps the Stadium Crossings Basin. The County identified this area as 27% commercial, and 73% industrial. The proposed development is for commercial, office, and industrial land uses and thus is expected to generate similar wastewater flows as within the County model.

Area OL 8 is within the Katella District. The County identified this area as 100% commercial and office. The Katella District land use for the area is consistent with the County and is expected to generate higher wastewater flows due to an increase in the floor-area-ratios.

Area SA 8 is within the Sportstown District. The County identified this area as 94% commercial/office and 6% industrial. The Sportstown District land use is consistent with the County's model and is expected to generate similar wastewater flows. A direct connection to the County's Orangewood Avenue Diversion Sewer is planned.

Area NP 36 is also within the Sportstown District. The County identified this area as 100% commercial and office. The Sportstown District land use is consistent with the County's model.

Area NP 33 is within portions of the Existing District, Gateway District and the Gene Autry District. The County identified this area as 90% office commercial, and 10% industrial. The proposed land use is consistent with the County's.

SUMMARY OF LAND USE COMPARISONS				
County Area	ASAMULP Districts	County Land Use	ASAMULP Land Use	Comments
OL 2	EX,KAT	73% Industrial, 27% Comm	Industrial, Comm	No Change
OL 5	EX,KAT	34% Res 63% Comm 3% Industrial	Industrial, Comm	No Change in region
OL 8	KAT	100 % Comm	Comm	Increase impacts
OL 9	AR	75% Res 25% Comm	Comm	Increase impacts
NP 33	GA,GE,EX	90% Comm 10% Industrial	Industrial Comm	No Change
NP 35	EX,GA,SP	100% Comm	Comm Industrial	No Change
NP 36	SP	100% Comm	Comm	No Change
SA 8	SP	100% Comm	Comm	Minor Increase

Legend:

EX=Existing

KA=Katella

AR=Arrowhead Pond

GA=Gateway

GE=Gene Autry

SP=Sportstown

Anaheim Sports Center EIR, 1996 analyzed the Sportstown District improvement area. Land uses addressed by the report were consistent with the current plan for the development. The report concluded that no significant impacts would occur to the City sewers as a result of the development and identified on-site sewer improvements to be completed in conjunction with the project.

Mitigation Measures

Mitigation Measure No. 1 – Construct 12-inch replacement sewer in Douglass Road from Katella Avenue to the proposed Office/Commercial/Hotel project north of the Arrowhead Pond.

Mitigation Measure No. 2 – Construct all sewer improvements listed in the sewer deficiency studies. One possible mitigation measure may be to construct a sewer line in Katella Avenue that will flow from a point between the Santa Ana Freeway (I-5) and State College Boulevard to intersect with the County's trunk line in State College Boulevard.

Significant Unavoidable Adverse Impacts

Implementation of the project design features and mitigation measures listed above will reduce the impact on the wastewater collection system to a level of insignificance.

Cumulative Impacts

The preliminary overview revealed that there would be a minimal change to the County's master-plan for the project area and that CSDOC facilities have been adequately sized to handle the proposed project flows.

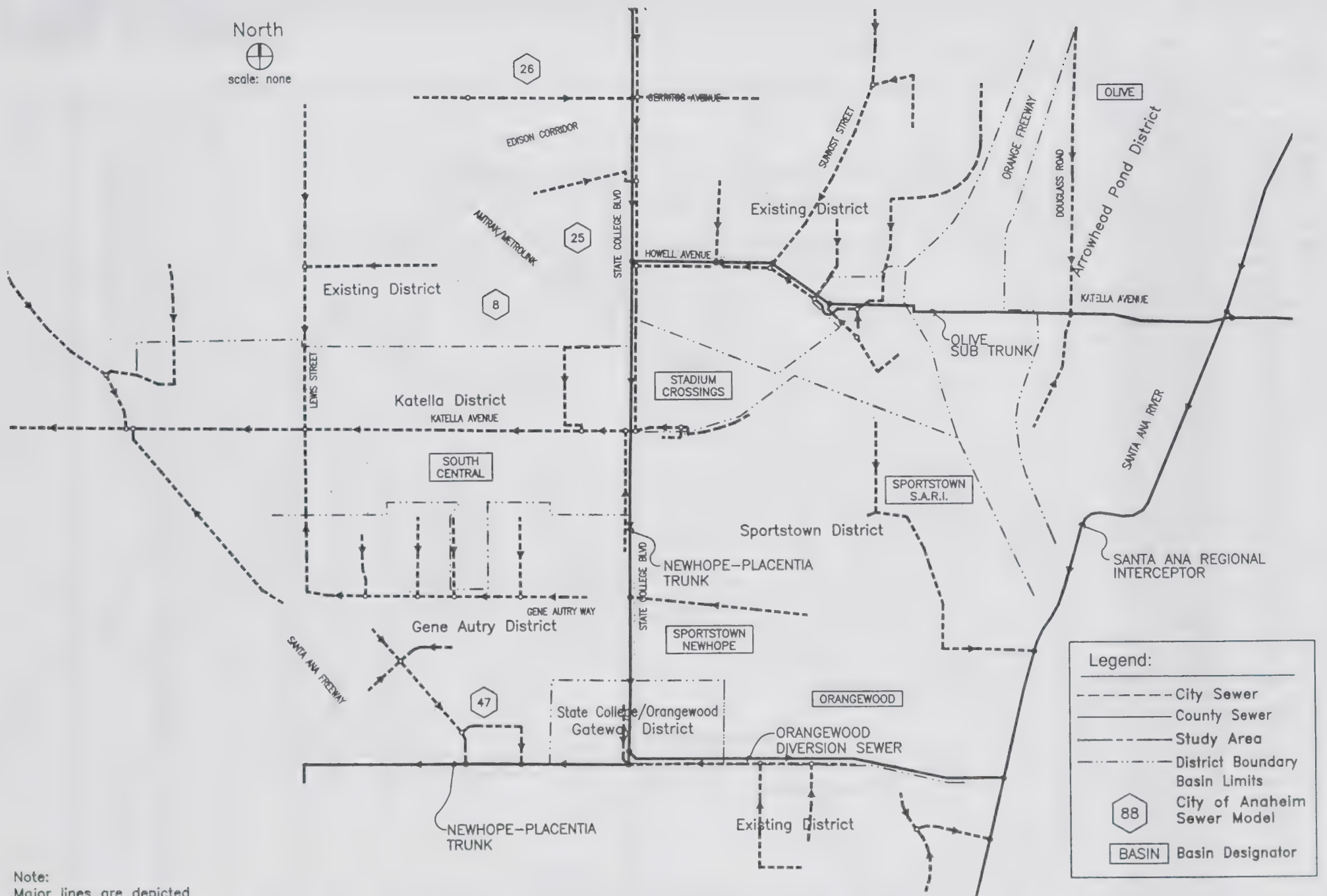
Relative to the City sewers, an increase in flow is expected. The analysis did not include a specific review of the sewers within the development areas as to respect to where actual land use changes will occur within the Districts (since this information was not available). The sewer deficiency studies, included in the Technical Appendix, only evaluated deficiencies in the sewer system for existing land use and for proposed land uses pro-rated using assumed average floor-area-ratios throughout the District and Basin (using City Master-Plan criteria).

Based on the deficiency studies in progress, mitigation measures will be identified and should be adopted to address deficiencies identified herein along with those in previous studies. See Exhibit II-2 for the proposed ASAMULP sewer system. When more specific developments are defined, studies specific to the future developments will need to be prepared to determine if City sewer lines have adequate capacity due to the actual development proposed.

Sources: (Sited previously in text above).

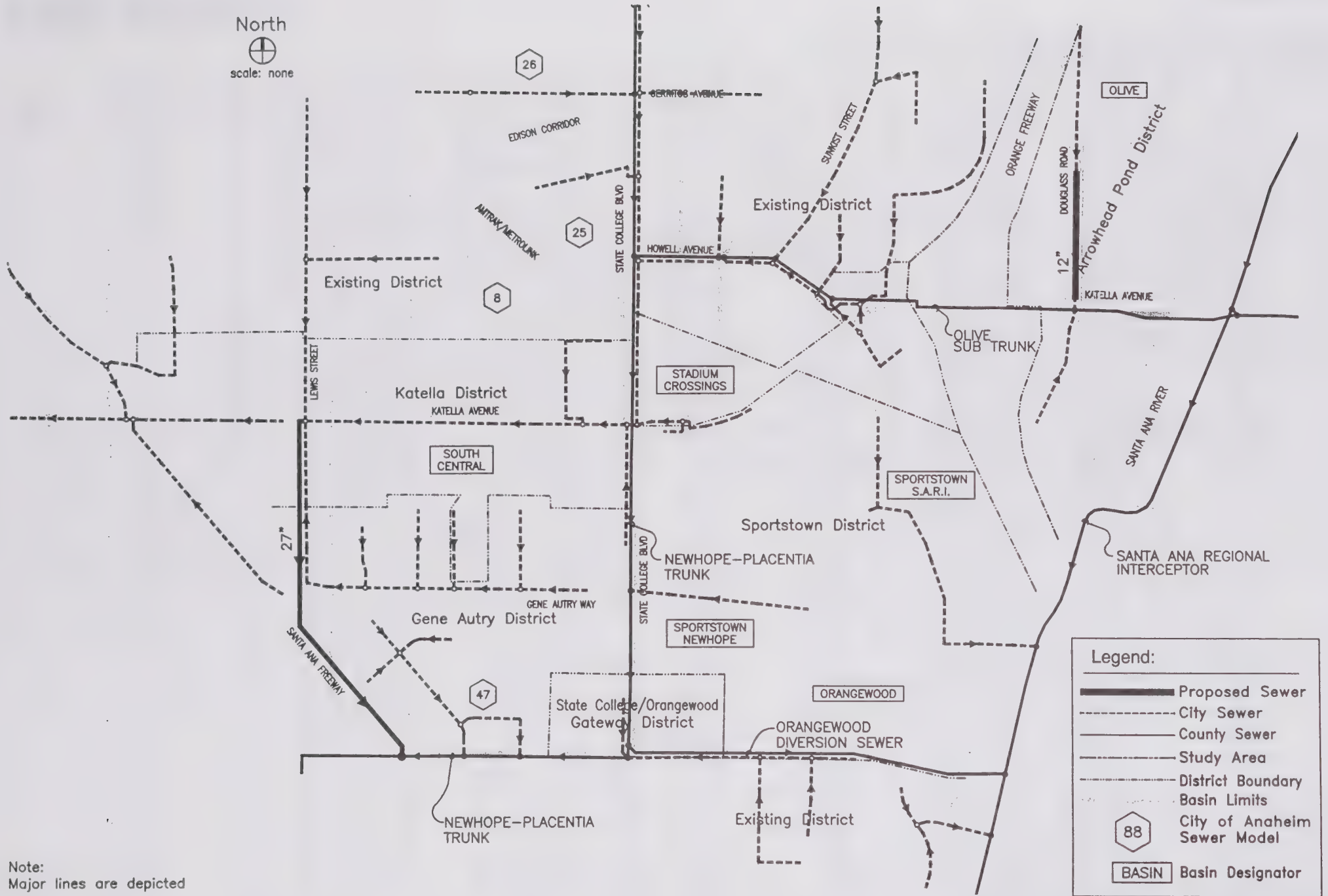
North

 scale: none



Note:
 Major lines are depicted

North
scale: none



Proposed Sewer System

ANAHEIM STADIUM AREA MASTER LAND USE PLAN EIR

Exhibit II-2

TABLE II.1
PROJECTED AVERAGE DAILY SEWER DEMAND

Component	Unit	Factor	Wastewater Generation Rate (gallons per day)	ADWF (million gallons per day)
Existing Uses				
Sportstown Area (1)				
1. Anaheim Stadium	45,000	SEATS	4	0.180
2. Exhibition Center	150,000	SF	0.08	0.012
	Subtotal			0.192
Other Areas (2)				
1. Industrial	5,895,786	SF	0.08	0.472
2. Office	2,120,539	SF	0.20	0.424
3. Retail	427,797	SF	0.08	0.034
4. Hotels (400 ROOMS) (4)	293,440	SF	0.204	0.060
	Subtotal			0.896
Existing Wastewater Flows				1.088
Additional Proposed Uses				
Sportstown Area (1)				
1. Entertain/Retail (Sportstown)	750,000	SF	0.08	0.060
2. Office	900,000	SF	0.20	0.180
3. Hotel #1 (350 ROOMS) (4)	385,000	SF	0.136	0.053
4. Hotel #2 (150 ROOMS) (4)	165,000	SF	0.136	0.023
5. Youth Sports Center	750	SEATS	4	0.003
6. Parking (Onsite)	14,000	SPACES	0.00	0.000
Parking (Offsite)	6,350	SPACES	0.00	0.000
	Subtotal			0.318
Other Areas (2)				
1. Industrial	(491,303)	SF	0.08	(0.039)
2. Office	1,871,285	SF	0.20	0.374
3. Retail	452,026	SF	0.08	0.036
4. Hotel (1240 ROOMS) (4)	991,603	SF	0.1875	0.186
PROPOSED NET PROJECT INCREASE				0.557
Total Additional Wastewater Flows				0.875
Total Proposed Wastewater Flows				1.963
Peak Flow (3)				3.926

NOTES

- 1) Adapted From Anaheim Sports Center EIR, January 1996
- 2) Adapted from City of Anaheim Water Criteria (approximately 5/6th's of Water Demand)
- 3) Peak Dry Weather Flow is 2 times ADWF
- 4) Hotel Rate Based on 150 gpd/room.

**Anaheim Stadium Area
Master Land Use Plan
DRAFT EIR**

**III. DRAINAGE/STORM DRAIN
REPORT**

III. DRAINAGE/STORM DRAINS

This section addresses the storm drain system serving the Anaheim Stadium Area Master Land Use Plan (ASAMLUP) overlay area outlined in Exhibit III-1. The Sportstown Anaheim District is not a Part of the ASAMLUP overlay area.

Environmental Conditions

Regional Setting

The ASAMLUP consists of two distinct drainage basins. The eastern drainage basin of the ASAMLUP is within a portion of Drainage District Area 27 from the City of Anaheim Master Plan for Drainage and drains directly to the OCFCD's Santa Ana River (E01). The Federal Emergency Management Agency (FEMA) has indicated on the Flood Insurance Rate Maps (FIRM) that the eastern drainage basin is within two Flood Zones (1997). The northerly portion is in Flood Zone X and is subject to flooding during a 500-year flood or a 100-year flood with average depths of less than 1 foot; or with a drainage area less than 1 square mile; or areas protected by levees from a 100-year flood. The remaining area is in Flood Zone A99 that will convert to a non-flooding classification (the Santa Ana River FIRM will be removed) once the drainage improvements to the Santa Ana River watershed are completed in 1999 as described by the following:

Orange County is in the process of (1) improving the lower Santa Ana River from I-405 to its outlet at the Pacific Ocean, (2) constructing the Seven Oaks Dam in Redlands, and (3) raising Prado Dam by 28.4 feet to increase its capacity to detain additional runoff. These three improvement projects are included in the OCFCD's 5-Year Capital Improvement Plan.

The central/eastern portion of the ASAMLUP drains into the OCFCD's Southeast Anaheim Channel (SAC, E12) which discharges into the Santa Ana River (E01) open channel watercourse. This County facility varies in pipe size from 42-inches at the upstream end to an 11-foot by 10-foot reinforced concrete box culvert (RCBC) where it enters the Santa Ana River Channel. This SAC starts at the Santa Ana River facility then proceeds upstream in a northwesterly direction approximately 1,760 feet. Then continues northerly for about 200 feet to the South City Limits of Anaheim, then northerly 915 feet to the centerline of Orangewood Avenue. The channel then heads northerly 2,800 feet across the Anaheim Stadium property to a point on the north side of Katella Avenue angling in a northeasterly direction to a point across the AT&SF Railroad tracks. Once across the

tracks, it continues northerly to Cerritos Avenue, then westerly along Cerritos Avenue to State College Boulevard, then northerly in State College Boulevard to Lincoln Avenue.

The County of Orange has estimated the 100-year discharges for the SAC (E12) facility. These discharges were then utilized in the hydraulic analysis (see the Technical Appendices for the County's Southeast Anaheim Channel Technical Report) for evaluation of the capacity of the E12 facility. Per the above report, at the upstream point of study (State College Boulevard and Cerritos Avenue), the RCBC can handle only 80% the required discharge (Q100).

The western portion of the project area drains to the OCFCD's Spinnaker Storm Drain (CO5P21) which discharges into the OCFCD's regional facility, East Garden Grove-Wintersburg Channel (EGGWC, CO5). The upstream point of the EGGWC starts just south of Chapman Avenue about 675 feet west of Lewis Street. This channel was built in early 1960's as a RCBC and trapezoidal channel. By current standards, the EGGWC has a capacity less than a 10-year storm event. In 1989, the trapezoidal portion of the EGGWC was replaced with a RCBC designed to convey the 100-year storm frequency south of Chapman Avenue to the Haster Retarding Basin. However, due to the OCFCD's downstream facilities being deficient, this fairly new EGGWC section can not convey the 100-year storm until the downstream deficiencies are corrected that may involve installation of pumps.

Local Setting

The area called the Anaheim Stadium Area Master Land Use Plan (ASAMLUP) overlay area is delineated in Exhibit III-1. The Sportstown Anaheim District is not part of this ASAMLUP overlay area. The ASAMLUP encompasses two distinct drainage basins: one basin drains easterly of State College Boulevard to the Santa Ana River, and the second basin drains westerly via the County Spinnaker Storm Drain to the EGGWC (CO5).

Eastern Portion of the ASAMLUP

The eastern drainage basin of the ASAMLUP has State College Boulevard as the western border, the Santa Ana River as the eastern border, the South City Limits (1,100 feet south of Orangewood Avenue) as the southern border, and the Edison Easement as the northern border. This drainage basin is predominantly built-out.

The changes in total impervious surfaces between the existing condition and the increased density scenario of the build-out ASAMLUP will be negligible. A consultant retained by the City is completing a master plan drainage study for

Drainage District 27 that will determine existing storm drain deficiencies. This drainage study will be completed prior to final approval of this ASAMLUP EIR.

Western Portion of the ASAMLUP

The western drainage basin of the ASAMLUP has State College Boulevard as the western border, the Santa Ana River as the eastern border, the South City Limits (1,100 feet south of Orangewood Avenue) as the southern border, and the Edison Easement as the northern border. The western drainage basin of the ASAMLUP drains to the OCFCD's Spinnaker Storm Drain that connects into the OCFCD's EGGWC (CO5) at Chapman Avenue about 675 feet west of Lewis Street. The South Central Area Master Plan of Drainage (SCAMPD) [Ref. #4] discusses and identifies existing and build-out deficient drainage areas that are subject to flooding and recommends drainage improvements to mitigate the deficiencies. In 1973, the City completed a Master Plan for Drainage that divided the City into 42 drainage areas where the western drainage basin of the ASAMLUP encompasses a portion of Drainage District 26 as shown on Exhibit III-1.

Any storm drain deficiencies within Drainage District 26 have been addressed adequately in the SCAMPD. With the construction of the Santa Ana Freeway I-5 through the City of Anaheim, most of these drainage deficiencies will be constructed. Future developments will be responsible for determining whether the recommended drainage improvements need to be extended to adequately serve their future project(s) to prevent flooding by submitting detailed drainage reports for review and approval by the City in cases only where the proposed development will increase the impervious surface of the site assumed in the SCAMPD.

The City's standard storm drainage criteria that should be applied in the design of proposed drainage facilities within the ASAMLUP are shown in the table below.

DRAINAGE DESIGN CHART

The use of underground storm drain systems shall be required when any one of the following conditions exist:

- a. Flows will exceed street right-of-way.
- b. Future upstream development will cause drainage problems.
- c. The flood width on arterial highways exceeds the parking lane plus one-half a travel lane or 17 feet from curb face, whichever is less, during a 10-year storm.
- d. The need for cross gutters on arterial highways.
- e. Excess nuisance water in residential areas (surface flow maximum is 1,000 feet).
- f. Median drainage is required.
- g. Flooding of building in a 100-year storm.
- h. Product of depth x velocity is greater than six.
- i. Flooding or street overflow will cause damage.

Design Storm Frequency for Drainage Systems*

100-Year	Arterial highways in hillside areas, storm drains connecting to the Santa Ana River
25-Year	Arterial highways in flatland areas, local streets in hillside areas, storm drains in sump conditions
10-Year	Local streets in flatland areas, onsite private drainage systems
Source: City of Anaheim Public Works Department 1992.	

The existing City storm drain lines in the ASAMLUP area were designed and constructed over 25 years ago especially in the eastern drainage basin. Evaluation of these existing storm drain lines under the OCFCD 1986 Hydrology Manual may indicate that several existing lines are currently inadequate and can handle a storm less than a ten-year frequency storm event.

Environmental Impacts

Storm Water

In the eastern drainage basin of the ASAMLUP, runoff from the project site will be collected by on-site drains, area drains, and catch basins, and directed via a subsurface drainage system to the County regional storm drain facilities, the SAC (E12) or direct into the Santa Ana River (E01). In the western drainage basin, runoff from the project site will be collected by on-site drains, area drains, and catch basins, and directed via a subsurface drainage system to the County regional storm drain facility, the EGGWC (CO5), via the County Spinnaker Storm Drain.

Implementation of the ASAMLUP would result in a nominal amount of additional impervious surface. Consequently, the storm water runoff generated from the full development of the ASAMLUP will remain relatively the same. However, this nominal increase may in certain areas create impacts to the existing drainage facilities. Therefore, the following drainage improvements would be required to adequately serve the proposed project (see Exhibit III-2).

As part of the construction of the project, an extension of the existing onsite drainage system of gutters, main line pipes, catch basins, and laterals would be required to mitigate any drainage impacts in accordance with the SCAMPD and/or the revised Drainage District 27 Master Plan of Drainage.

Alternative storm drain alignments must be explored and drainage improvements proposed to mitigate the existing deficient SAC. This new drainage system will be needed to drain the northerly Cerritos Avenue at State College Boulevard. This system ranging in size from 48-inches to 60-inches will be designed to convey storm runoff of approximately 200 cfs from the above mentioned intersection to the Santa Ana River (EO1) via the SAC (E12) and a path across the stadium property (see Exhibit III-2).

Water Quality

Implementation of the ASAMLUP would result in a minor increase in impervious areas and, therefore, will result in a minor increase in storm runoff carrying street contaminants (sedimentation, oil, grease, etc) to the Pacific Ocean. This increase in street contaminants to the rivers and ocean is more dependent upon the frequency of rainstorms than the amount of runoff generated. It is not anticipated that any adverse impacts will result to

groundwater quality since a minor increase in runoff would occur. However, grading of the project during construction may temporarily increase stormwater runoff erosion due to the exposure of the underlying soils.

Mitigation Measures

Mitigation Measure No. 1 – Prior to the development of any area within the ASAMLUP area and within FEMA's 100-year floodplain, a detailed drainage study needs to be performed and submitted to the City for review and approval and all proposed building pads elevated above the 100-year floodplain.

Mitigation Measure No. 2 – Prior to the issuance of any building permits, a detailed drainage analysis will be required to determine if any project design features (construction of landscape berms or other barriers) will retard or take storm runoff outside the limits of the public right-of-ways. Measures will be required to avoid any flooding effects on downstream properties. Applicable storm drain improvements will be required per the SCAMPD and the revised Drainage District 27 Master Plan of Drainage.

Mitigation Measure No. 3 – The property owner/developer shall apply for a National Pollution Discharge Elimination System construction permit. This permit would require the preparation of a Storm Water Pollution Prevention Plan to mitigate the erosion that may occur from stormwater runoff during the construction period(s).

Significant Unavoidable Impacts

The proposed system improvements discussed above will be provided in order to accommodate the ASAMLUP. No significant impacts are anticipated.

Cumulative Impacts

Completing all three improvement projects included in OCFCD's 5-year Capital Improvement Plan will move the Project Site and surrounding area out of the 100 year flood plain. It has also been shown that the development of the ASAMLUP will decrease the burden on the existing storm drain system, thus having a positive impact. Therefore additional storm drain flows from the ASAMLUP will not be affected by other development or cumulative impacts from other developments.

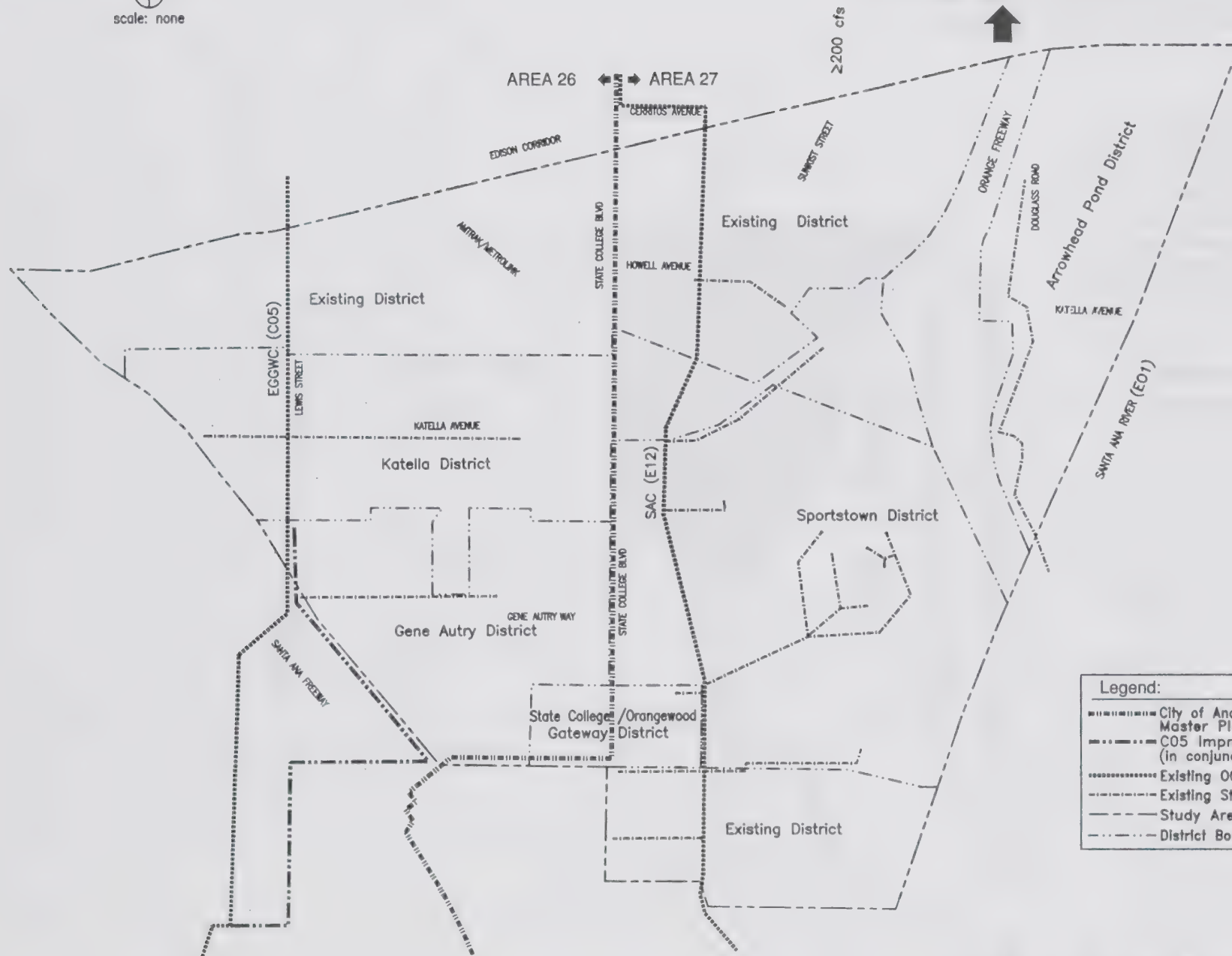
References

1. Orange County Flood Control District Design Manual, July 1972.
2. Flood Insurance Rate Map (FIRM) Panel 21 of 81 (map number 06059c0021 F) Map revised: January 3, 1997.
3. Water Surface and Pressure Gradient (WSPG) Hydraulic Analysis System.
4. City of Anaheim South Central Area Master Plan of Drainage, second revision, dated February 1993.
5. County of Orange Southeast Anaheim Channel (E12) Technical Report, prepared by ASL Consulting Engineers, dated September 1997.
6. Storm Drainage and Hydrology Study Southeast Anaheim Channel – Hydrology and Hydraulics on-site conditions Stadium Crossings by EKN Engineering, dated March 27, 1998.
7. OCEMA Hydrology Manual, 1986.

North

 scale: none

REFER TO TECHNICAL
 APPENDICES FOR DRAINAGE
 AREAS OUTSIDE OF PROJECT
 STUDY AREA.



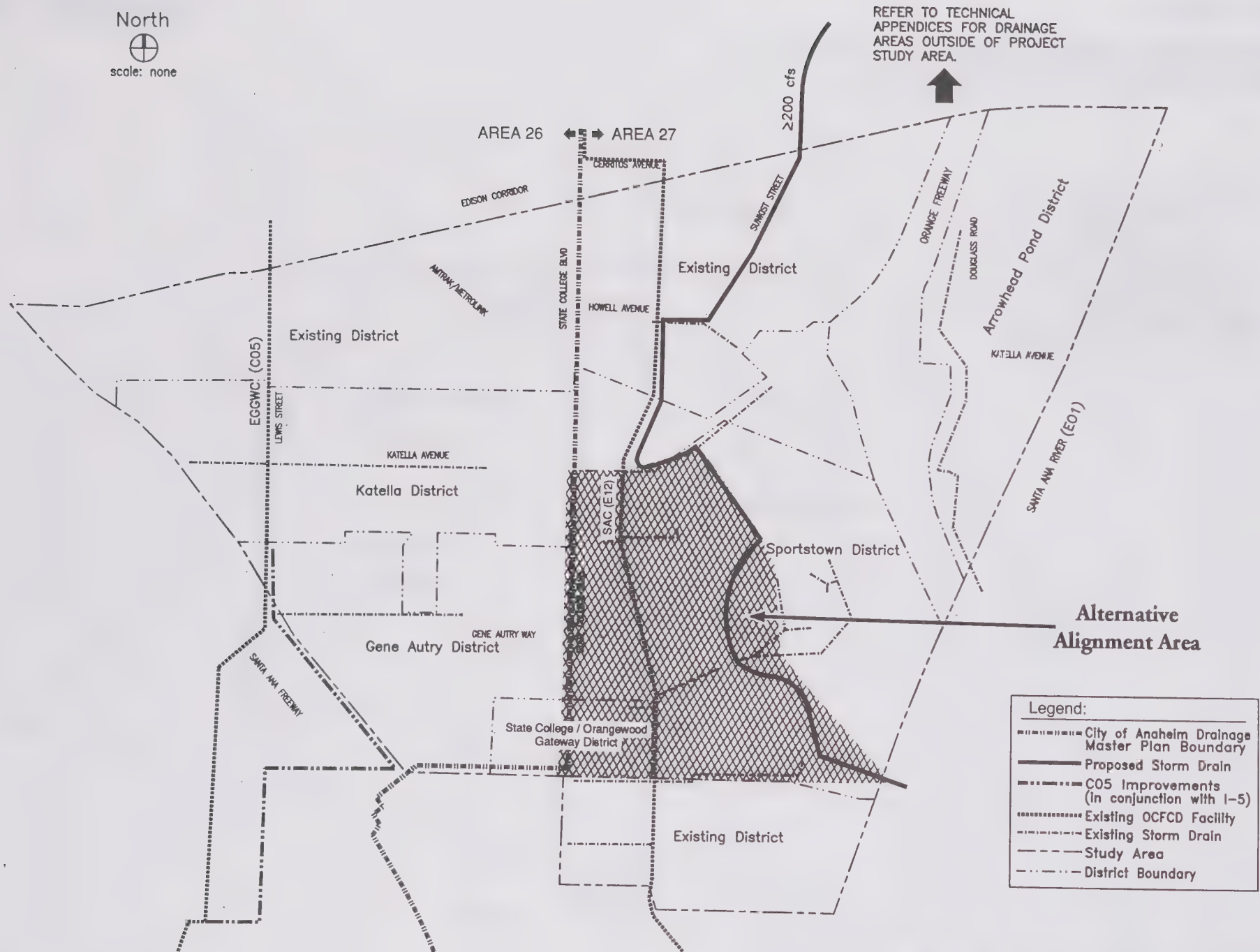
Legend:	
	City of Anaheim Drainage Master Plan Boundary
	C05 Improvements (in conjunction with I-5)
	Existing OCFCF Facility
	Existing Storm Drain
	Study Area
	District Boundary

Existing Storm Drain System ANAHEIM STADIUM AREA MASTER LAND USE PLAN EIR

Exhibit III-1

North

 scale: none



Conceptual Storm Drain System ANAHEIM STADIUM AREA MASTER LAND USE PLAN EIR

Exhibit III-2

**Anaheim Stadium Area
Master Land Use Plan
DRAFT EIR**

IV. POWER SUPPLY REPORT

IV. ELECTRICAL

This section addresses the electrical system serving the Anaheim Stadium Area Master Land Use Plan (ASAMLUP) outlined in Exhibit IV-1. For the purpose of this analysis these ASAMLUP alternatives have the same effect on the electrical system.

Environmental Conditions

Regional Setting

The City of Anaheim Public Utilities Department provides electrical services to the Project Site area. The Public Utilities Board advises the City Council on Public Utility matters.

Primary power supply comes from the San Onofre Nuclear Power Plant and from the Intermountain Power Plant in Utah via the Southern California Edison (SCE) network. The Combustion Turbine Generator at Doweling Substation supplies an additional 50 megawatts for peaking requirements. The city's main substation is located on Lewis Street, east of 1-5. Also in the project vicinity are Southwest Substation and Katella Substation and these existing facilities currently provide adequate service to the project area.

Local Setting

The project site is served by the 250 million volt amperes (MVA) Lewis Substation located on the corner of Cerritos Avenue and Lewis Street, south of Cerritos Avenue, and the 100 MVA Katella Substation located at the corner of Katella Avenue and Claudina Way. Lewis Substation is a 230 kV service point and the substation rating is four 150/200/250 MVA "A" banks.

The Project Site is currently serviced from the Linda, Marcy and Cindy 12 kV circuits from the Lewis Substation and Mueller, S.A.V.I., Kane and Winston 12 kV circuits from the Katella Substation. These circuits that are adjacent to the Project Site are overhead along State College Boulevard, Katella Avenue, and Orangethorpe Avenue, except for the portions in the existing stadium parking lot.

As part of the City of Anaheim's Underground Conversion Program, the City of Anaheim is in the process of undergrounding all of the existing utilities (69kV and 12kV transmission and distribution systems, communication systems, telephone, CATV, CAT and associated facilities) on the major roadways in the Commercial Recreation Area. This includes the future undergrounding of overhead and underground facilities for State College Boulevard from approximately 700 feet north of Orange wood Avenue to La Palma Avenue. This overhead is scheduled for undergrounding in the year 2001.

Project Description

The Anaheim Stadium Master Land Use Plan includes the Existing District, Gene Autry District, Arrowhead Pond District, Katella Corridor District, Gateway District and the Sportstown Anaheim District. The Existing District consists mainly of industrial use, the Gene Autry District consists of office and retail space, the Arrowhead Pond District consists of office space, retail space and hotels, the Katella District consists of industrial use, office space, retail space and hotels, the Gateway District consists of industrial use, office space, retail space and hotels and the Sportstown Anaheim District consists of entertainment facilities, office space, and retail space.

Environmental Impacts

The City of Anaheim Electrical Engineering Department designs their own electrical systems and they project system requirement based on a Five Year Plan which is updated annually. The ASAMLUP project is a 10 to 20 year plan. Table IV.1 shows the projected peak demands for the ASAMLUP.

Project Design Features

With development of the ASAMLUP, new circuits and improvements will be required. The Lewis Substation and the Katella Substation presently have spare capacity but distribution may be problematic. Southwest Substation located at the corner of Ninth Street and Audre Drive is an alternate source but it is some distance away from Project Site. The Sportstown project, slated for construction within the five year plan will require two new distribution circuits. Additional circuits and improvements will be needed as the proposed projects of the ASAMLUP are executed. The projected design features will be decided by the final analysis which is conducted by the City's Public Utilities Department.

Mitigation Measures

The project design features associated with the construction of the ASAMLUP are anticipated to meet any power needs therefore no mitigation measures are proposed at this time. This conclusion may change with the final analysis by the City's electrical department.

Significant Unavoidable Adverse Impacts

The proposed electrical system improvements proposed by the City will be provided in order to accommodate the ASAMLUP. No significant unavoidable impacts are anticipated.

TABLE IV.1
PROJECTED PEAK ELECTRICAL DEMAND

Component	Unit Factor	Consumption Rate (watts)	Electrical Demand (KW/Day)
Existing Land Use			
Stadium Area (2)			
1. Anaheim Stadium	45,000 seats		2,909
2. Commercial/Office (At the Southeast corner of St. College and Katella)	55,140 sf	5.2	287
3. Exhibition Center	150,000 sf	5.2	780
4. Parking	16,000 spaces	0.05	800
Other Areas (1)			
1. Industrial	5,895,786 SF	8.75	51,588
2. Office	2,174,242 SF	4.7	10,219
3. Retail	374,094 SF	6.4	2,394
4. Hotels (400 ROOMS)	293,440 SF	4.8	1,409
Existing Demand			70,386
Proposed Land Use			
Stadium Area (2)			
1. Urban Entertainment/Retail	750,000 sf	6.7	5,025
2. Office	900,000 sf	5.2	4,680
3. Hotel #1 (385,000 sf)	350 rooms	4	1,400
4. Hotel #2 (165,000 sf)	150 rooms	4	600
5. Youth Sports Center (3)	750 seats	1	750
6. Parking (Onsite) (3)	14,000 spaces	0.05	700
7. Commercial/Office (At the Southeast corner of St. College and Katella) REMOVE	(55,140) sf	5.2	-287
Other Areas (1)			
1. Industrial	(491,303) SF	8.75	(4,299)
2. Office	1,871,285 SF	4.7	8,795
3. Retail	452,026 SF	6.4	2,893
4. Hotels (400 ROOMS)	991,603 SF	4.8	4,760
Total Project Net Demand			25,017
NOTES			
1) * The average power consumption figures were taken from SCE's "Distribution Design Standard."			
Average power consumption for retail space was calculated on the basis of even divisions between small and large retail spaces.			
The calculation of the average power consumption for industrial space was the average of the lowest and the highest industrial use.			
Office space <30K sf = 8.5 W/sf		Large Retail space >=30K sf = 4.2 W/sf	
Office space >=30K sf = 4.7 W/sf		Hotels/Motels = 4.8 W/sf	
Small Retail space <30K sf = 8.6 W/sf		Industrial Use = 6 W/sf to 11.5 W/sf	
2) Adapted from Stadium Area EIR - January 1996			

Cumulative Impacts

The additional electrical demand from the ASAMLUP will not be affect or be affected by other development or cumulative impacts from other developments.

North



scale: none

LEWIS
SUBSTATION

CINDY

CERRITOS AVENUE

EDISON CORRIDOR

SUNSET STREET

ORANGE FREEWAY

DOLGAS ROAD

Arrowhead Pond District

Existing District

S.A.V.I.

KATELLA AVENUE

SANTA ANA RIVER

Existing District

Katella District

KATELLA AVENUE LINDA

S.A.V.I.

MARCY

Sportstown District

Gene Autry District

GENE AUTRY WAY

MARCY

State College/Orangewood
Gateway District

MUELLER

Existing District

Legend:

- Study Area
- District Boundary
- 12KV CIRCUIT (CINDY)
- 12KV CIRCUIT (LINDA)
- 12KV CIRCUIT (MARCY)
- 12KV CIRCUIT (MUELLER)
- 12KV CIRCUIT (S.A.V.I.)

Existing Electrical System

ANAHEIM STADIUM AREA MASTER LAND USE PLAN EIR

Exhibit IV-1



IWA ENGINEERS

600 The City Parkway West, Suite 300
Orange, CA 92668
(714) 436-0166 • Fax (714) 436-0161

PUBLIC SERVICES AND UTILITIES TECHNICAL APPENDICES

**The Following Appendices are Available for Review at the
City of Anaheim Planning Department**

- **Sewer**
- **Drainage**

APPENDIX C

Traffic Study

ANAHEIM STADIUM AREA
MASTER LAND USE PLAN
Traffic Study

Prepared for:

Michael Brandman and Associates

Prepared by:

Austin-Foust Associates, Inc.
2020 North Tustin Avenue
Santa Ana, California 92705-7827
(714) 667-0496

September 28, 1998

ANAHEIM STADIUM AREA MASTER LAND USE PLAN

TRAFFIC STUDY

The City of Anaheim has identified the area surrounding the stadium as a redevelopment area. This traffic study has been prepared in support of the environmental documents being prepared for the redevelopment of the stadium area. The redevelopment area encompasses approximately 540 acres in the area bounded by the Union Pacific Railroad right-of-way to the north, the Santa Ana River to the east, Orangewood Avenue to the south, and the Santa Ana Freeway (I-5) to the west. The stadium and Sportstown are located in the study area but are not part of the proposed project. Known as the Stadium Area Master Land Use Plan, the redevelopment project consists of 1,871,300 square feet of office space, 452,000 square feet of retail space, 991,600 square feet of hotel space (1,240 rooms), and reduces industrial uses in the study area by 491,300 square feet.

This report summarizes the impacts of the proposed redevelopment project on AM and PM peak hour intersection levels of service. Future volume projections are determined from the buildout version of the Anaheim Traffic Analysis Model (ATAM). This model is a computerized trip generation, distribution, and assignment tool that evaluates various land use and circulation schemes. The traffic model was prepared to support the traffic analysis portion of the City's General Plan. A complete description of the traffic model can be found in the reference at the end of this report.

The analysis year assumes buildout of the City's General Plan, generally considered to be 20 years in the future. The buildout conditions include buildout of the City's land uses as well as the circulation system. Other than the extension of Gene Autry Way and Lewis Street across the I-5 Freeway, no new notable roads are anticipated to be built in the study area under buildout conditions. It should be noted that, although Lewis Street is assumed to extend from Katella Avenue to Orangewood Avenue, this extension is not needed to support project traffic. Rather, it is needed to complete the General Plan Circulation network. Katella Avenue is assumed to be widened to eight lanes west of State College Boulevard, and the entire segment in the study area is classified as a "smart street."

PROJECT SETTING

The arterials which provide access to the study area include Lewis Street, State College Boulevard, Katella Avenue, Gene Autry Way, and Orangewood Avenue.

Lewis Street is a north-south primary arterial on the Orange County Master Plan of Arterial Highways (MPAH). Lewis Street is assumed to be built out to its ultimate width of four lanes north of Gene Autry Way under buildout conditions. For this analysis, Lewis Street is assumed to terminate north of Gene Autry Way. It should be noted that the Lewis Street connection from Katella Avenue to Orangewood Avenue is not needed to accommodate project traffic. Rather, it is needed to complete the General Plan circulation network. The extension of Lewis Street to Gene Autry Way may be constructed as part of Stadium Area roadway improvements. Lewis Street continues south of Orangewood Avenue south of the I-5 Freeway as a six-lane arterial. Study intersections along Lewis Street are located at Cerritos Avenue, Katella Avenue and Orangewood Avenue.

State College Boulevard is a north-south major arterial in the study area which becomes The City Drive south of the I-5 Freeway. State College Boulevard is a six-lane facility in the study area. Study intersections are located at Cerritos Avenue, Katella Avenue, Gene Autry Way and Orangewood Avenue.

Katella Avenue is an east-west primary arterial west of State College Boulevard and a major arterial east of State College Boulevard. Katella Avenue is an eight-lane “smart street” west of State College Boulevard and a six-lane “smart street” east of State College Boulevard. Study intersections along Katella Avenue are located at Lewis Street, State College Boulevard, and SR-57 Freeway ramps.

Gene Autry Way is an east-west primary arterial on the MPAH. Gene Autry Way currently terminates east of the I-5 Freeway. Under buildout conditions, Gene Autry Way extends west across the freeway to Haster Street. The study intersection along Gene Autry Way is located at State College Boulevard.

Orangewood Avenue is an east-west primary arterial which will extend under the I-5 Freeway in October 1998 and becomes Walnut Avenue east of the study area. Orangewood Avenue is a four-lane arterial. Study intersections are located at Lewis Street, State College Boulevard, and SR-57 Freeway ramps.

Regional access to the study area is provided by I-5 Freeway (Santa Ana Freeway) and SR-57 Freeway (Orange Freeway). Interchanges on the I-5 Freeway in the study area are provided at State College Boulevard and Katella Avenue. A high occupancy vehicle (HOV) on-/off-ramp is being constructed at Gene Autry Way. Interchanges on the SR-57 Freeway in the study area are provided at Katella Avenue and Orangewood Avenue.

PROJECT DESCRIPTION

The proposed project consists of redevelopment of the area surrounding the stadium. Figure 1 illustrates the study area and development districts. Table 1 summarizes the land use assumptions by district. As this table indicates, the proposed project consists of a total of 1,871,300 square feet of office space, 452,000 square feet of retail space, 991,600 square feet of hotel space, and reduces industrial uses in the study area by 491,300 square feet.

TRIP GENERATION

Trip generation rates were obtained from the buildout version of the ATAM. The trips generated by the proposed project are summarized in Table 2. The proposed project will increase vehicle trips in the study area by 56,000 trips daily. During the PM peak hour, the proposed project will increase vehicle trips by 6,000 trips.

The ATAM land use database originally assumed buildout of the General Plan development in the study area. The model was then revised to eliminate the General Plan land use on the site, and was replaced by the square footages of the proposed project to obtain volumes with the proposed project. Traffic was distributed over the buildout circulation system. The buildout circulation system

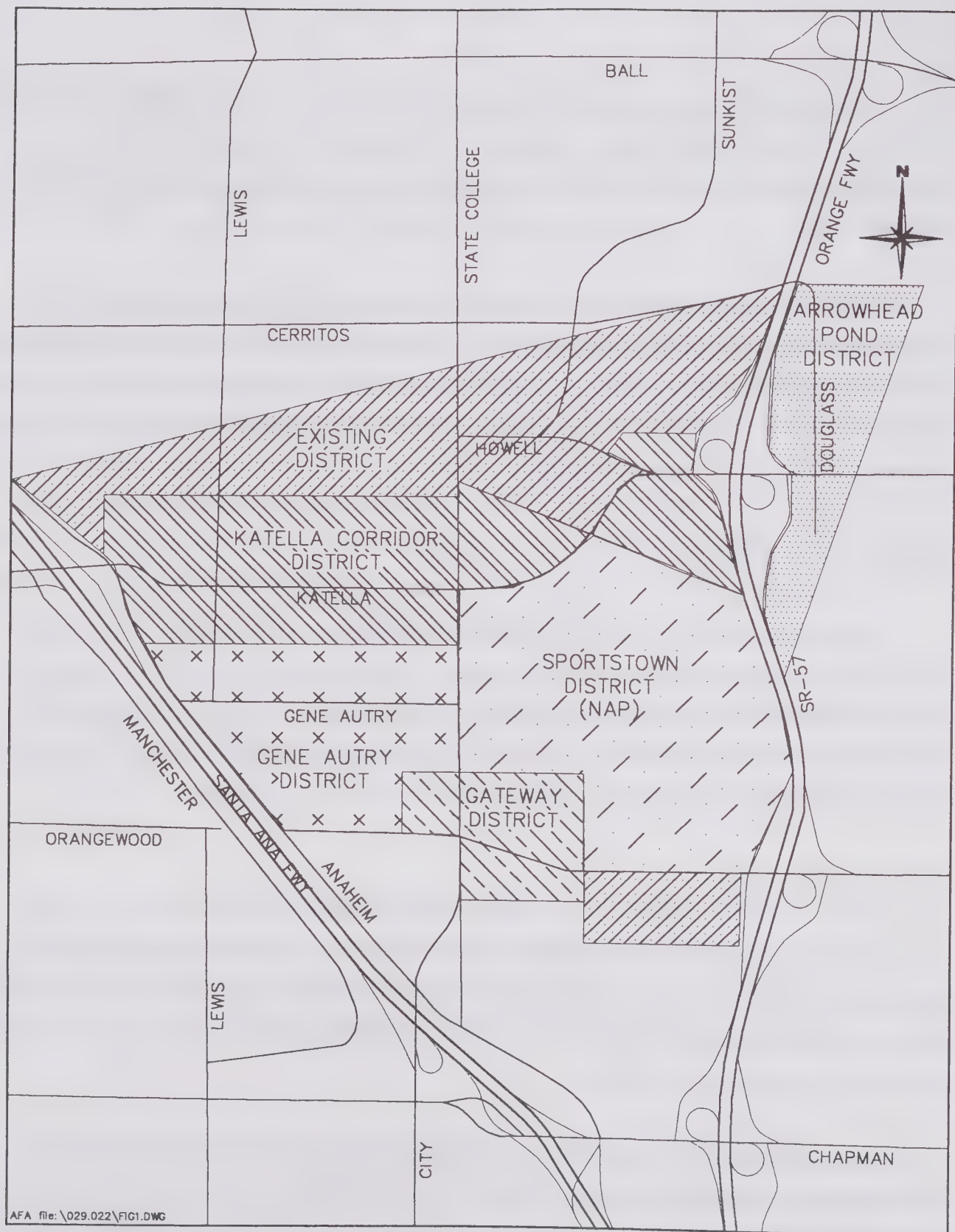


Figure 1
MLUP DEVELOPMENT DISTRICTS

Table 1

PROPOSED LAND USE SUMMARY

DISTRICT	USE	PROPOSED SQUARE FOOTAGE
Existing District	Industrial	126,862
Gene Autry District	Office	116,141
	Community Commercial	116,140
Arrowhead Pond District	Office	356,484
	Community Commercial	71,297
	Hotel	166,359
Katella Corridor District	Industrial	-216,210
	Office	1,220,322
	Regional Commercial	248,584
	Hotel	790,949
Gateway District	Industrial	-401,955
	Office	178,338
	Community Commercial	16,005
	Hotel	34,295
TOTAL	Industrial	-491,303
	Office	1,871,285
	Retail	452,026
	Hotel	991,603

Table 2

PROPOSED PROJECT TRIP GENERATION SUMMARY

LAND USE	UNITS	---AM PEAK HOUR---			---PM PEAK HOUR---			ADT
		IN	OUT	TOTAL	IN	OUT	TOTAL	
TRIP RATES								
Industrial		0.49	0.07	0.56	0.09	0.41	0.50	6.97
Office		1.84	0.23	2.07	0.35	1.70	2.05	15.33
Community Commercial		0.14	0.08	0.22	2.13	2.13	4.26	50.50
Regional Commercial		0.09	0.05	0.14	1.48	1.48	2.96	35.20
Hotel		0.19	0.22	0.41	0.37	0.29	0.66	9.45
TRIP GENERATION								
Industrial	-491.30 TSF	-241	-34	-275	-44	-201	-246	-3,424
Office	1,871.29 TSF	3,443	430	3,874	655	3,181	3,836	28,687
Community Comm	203.44 TSF	28	16	45	433	433	867	10,274
Regional Comm	248.58 TSF	22	12	35	368	368	736	8,750
Hotel	1,240 ROOM	236	273	508	459	360	818	11,718
TOTAL		3,488	698	4,186	1,871	4,141	6,011	56,004

assumes the extension of Gene Autry Way west across the freeway as well as buildout of all arterials to their ultimate widths.

Intersection capacity utilization (ICU) values were calculated based on the proposed project. The ICU values are a means of representing peak hour volume/capacity ratios, with a value of .90 representing the upper threshold for level of service (LOS) “D”. The with-project ICU values are summarized in Table 3. These ICU values are based on buildout lane configurations.

The intersections along Katella Avenue will operate at LOS “C” or better during the AM and PM peak hours. Along State College Boulevard, two intersections (State College Boulevard at Cerritos Avenue and State College Boulevard at Gene Autry Way) will operate at LOS “D” during the PM peak hour, and the remaining intersections along State College Boulevard will operate at LOS “C” or better. The intersections along Orangewood Avenue will operate at LOS “C” or better during the AM and PM peak hours.

Table 4 compares the buildout-with-project ICU values with the ICU values assuming the General Plan land uses (including Sportstown) for the study area. As this ICU comparison shows, the proposed project improves the level of service at two intersections and worsens the level of service at three intersections. However, all study intersections continue to operate at an acceptable level of service with the proposed project.

Figure 2 illustrates buildout-with-project ADT volumes in the study area. Buildout-with-General Plan land uses ADT volumes are illustrated in Figure 3. Comparison of these ADT volumes indicates that the proposed project will increase the ADT volumes slightly along Katella Avenue and State College Boulevard north of Orangewood Avenue, and will decrease ADT volumes slightly along Orangewood Avenue and State College Boulevard south of Orangewood Avenue.

CONGESTION MANAGEMENT PROGRAM

The proposed project must determine the potential impacts to the Congestion Management Program (CMP) network. CMP intersections in the study area are located at Katella Avenue and the

Table 3

BUILDOUT-WITH-PROJECT ICU SUMMARY

INTERSECTION	AM	PM
146. Lewis & Cerritos	.51	.62
147. Lewis & Katella	.41	.59
160. State College & Cerritos	.66	.84
161. State College & Katella	.59	.80
162. State College & Gene Autry	.61	.83
163. State College & Orangewood	.52	.75
176. SR-57 SB Ramps & Katella	.50	.71
177. SR-57 NB Ramps & Katella	.65	.73
307. SR-57 SB Ramps & Orangewood	.68	.63
308. SR-57 NB Ramps & Orangewood	.74	.48

Level of service ranges: .00 - .60 A
.61 - .70 B
.71 - .80 C
.81 - .90 D
.91 - 1.00 E
Above 1.00 F

Table 4

BUILDOUT ICU SUMMARY COMPARISON

INTERSECTION	BUILDOUT W/PROJECT		GENERAL PLAN BUILDOUT	
	AM	PM	AM	PM
146. Lewis & Cerritos	.51	.62	.52	.63
147. Lewis & Katella	.41	.59	.60	.78
160. State College & Cerritos	.66	.84	.58	.72
161. State College & Katella	.59	.80	.63	.79
162. State College & Gene Autry	.61	.83	.78	.84
163. State College & Orangewood	.52	.75	.53	.85
176. SR-57 SB Ramps & Katella	.50	.71	.52	.65
177. SR-57 NB Ramps & Katella	.65	.73	.53	.64
307. SR-57 SB Ramps & Orangewood	.68	.63	.76	.66
308. SR-57 NB Ramps & Orangewood	.74	.48	.75	.50

Level of service ranges: .00 - .60 A
.61 - .70 B
.71 - .80 C
.81 - .90 D
.91 - 1.00 E
Above 1.00 F

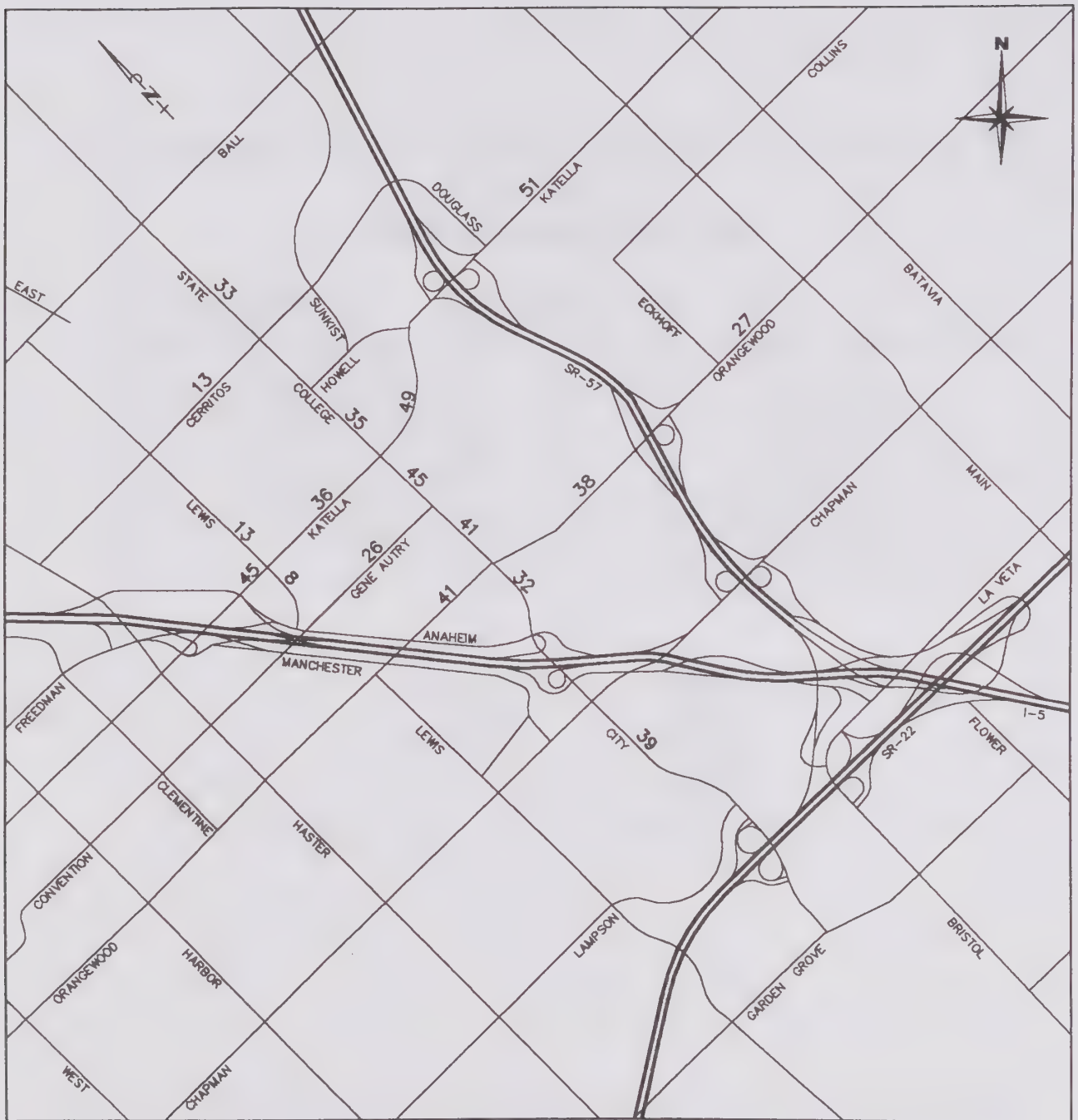


Figure 2
 BUILDOUT WITH PROJECT
 ADT VOLUMES
 (000s)



Figure 3

BUILDOUT GENERAL PLAN LAND USE
ADT VOLUMES
(000s)

SR-57 Freeway. The CMP guidelines specify that a project cannot cause CMP locations to operate at LOS “E” or “F”.

The intersection of SR-57 southbound and Katella Avenue will operate with an ICU value of .50 (LOS “A”) during the AM peak hour and .71 (LOS “C”) during the PM peak hour with the proposed project. The intersection of SR-57 northbound and Katella Avenue will operate with an ICU value of .52 (LOS “A”) during the AM peak hour and .75 (LOS “C”) during the PM peak hour. The proposed project does not cause these two CMP intersections to operate at LOS “E” or “F;” therefore, the project has no significant impact on the CMP network.

CONCLUSIONS

The proposed Master Land Use Plan for the stadium area will generate approximately 56,000 vehicle trips daily, of which 6,000 will be generated during the PM peak hour. The buildout circulation system will be able to accommodate the proposed project traffic.

REFERENCES

1. “Anaheim General Plan Traffic Analysis, Traffic Model Description,” Austin-Foust Associates, Inc., August 1992.

APPENDIX A

INTERSECTION CAPACITY UTILIZATION

Peak hour intersection volume/capacity ratios are calculated by means of intersection capacity utilization (ICU) values. ICU calculations were performed for the intersections shown in Figure A-1. For simplicity, signalization is assumed at each intersection. Precise ICU calculations of existing non-signalized intersections would require a more detailed analysis.

The procedure is based on the critical movement methodology, and shows the amount of capacity utilized by each critical move. A capacity of 1700 vehicles per hour (VPH) per lane is assumed together with a .05 clearance interval. A "de-facto" right-turn lane is used in the ICU calculation for cases where a curb lane is wide enough to separately serve both thru and right-turn traffic (typically with a width of 19 feet from curb to outside of thru-lane with parking prohibited during peak periods). Such lanes are treated the same as striped right-turn lanes during the ICU calculations, but they are denoted on the ICU calculation worksheets using the letter "d" in place of a numerical entry for right-turn lanes.

The methodology also incorporates a check for right-turn capacity utilization. Both right-turn-on-green (RTOG) and right-turn-on-red (RTOR) capacity availability are calculated and checked against the total right-turn capacity need. If insufficient capacity is available, then an adjustment is made to the total capacity utilization value. The following example shows how this adjustment is made.

Example For Northbound Right

1. Right-Turn-On-Green (RTOG)

If NBT is critical move, then:

$$\text{RTOG} = \text{V/C (NBT)}$$

Otherwise,

$$\text{RTOG} = \text{V/C (NBL)} + \text{V/C (SBT)} - \text{V/C (SBL)}$$

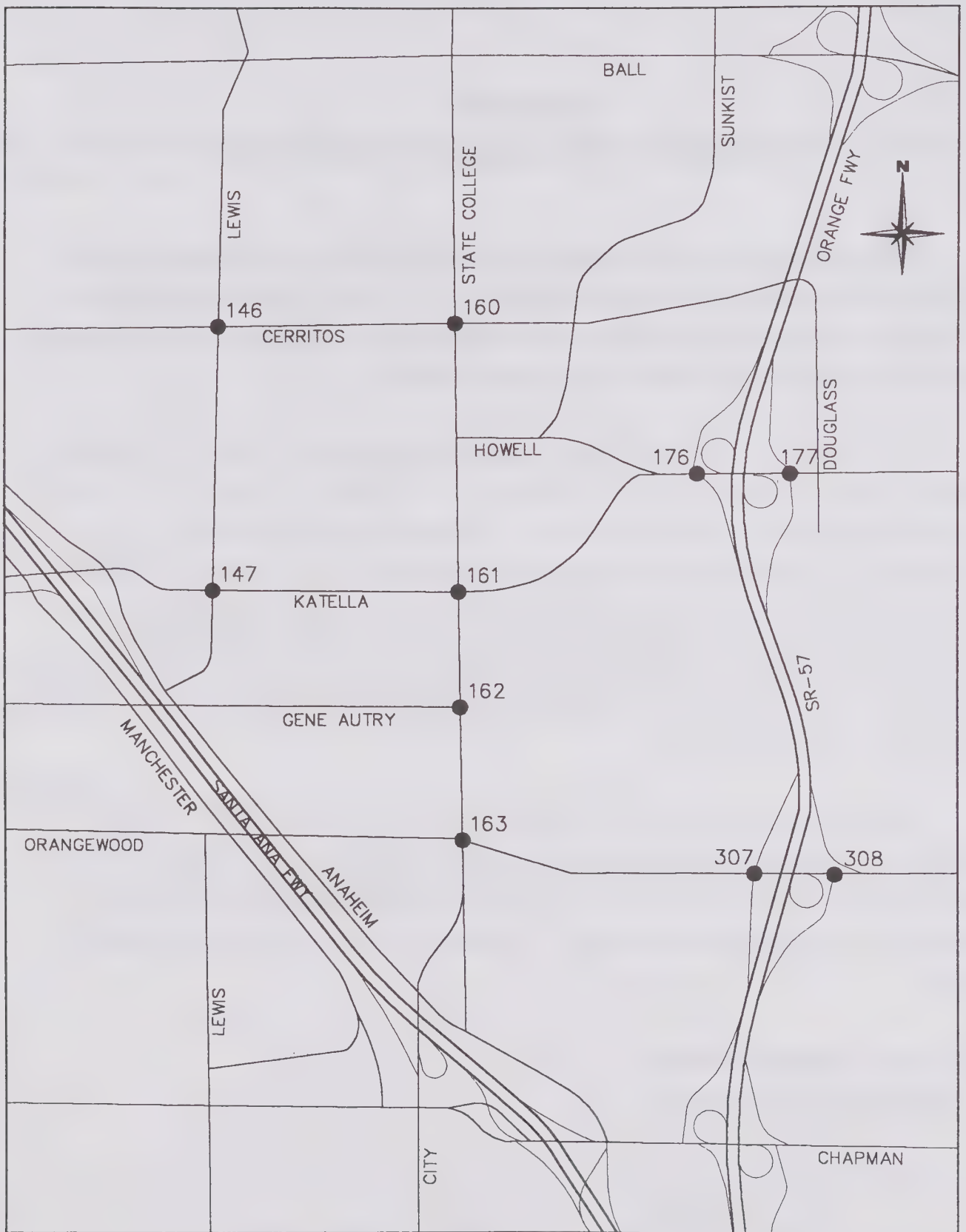


Figure A-1
INTERSECTION LOCATION MAP

2. Right-Turn-On-Red (RTOR)

If WBL is critical move, then:

$$\text{RTOR} = \text{V/C (WBL)}$$

Otherwise,

$$\text{RTOR} = \text{V/C (EBL)} + \text{V/C (WBT)} - \text{V/C (EBT)}$$

3. Right-Turn Overlap Adjustment

If the northbound right is assumed to overlap with the adjacent westbound left, adjustments to the RTOG and RTOR values are made as follows:

$$\text{RTOG} = \text{RTOG} + \text{V/C (WBL)}$$

$$\text{RTOR} = \text{RTOR} - \text{V/C (WBL)}$$

4. Total Right-Turn Capacity (RTC) Availability For NBR

$$\text{RTC} = \text{RTOG} + \text{factor} \times \text{RTOR}$$

Where factor = RTOR saturation flow factor (75%)

Right-turn adjustment is then as follows: Additional ICU = V/C (NBR) - RTC

A zero or negative value indicates that adequate capacity is available and no adjustment is necessary. A positive value indicates that the available RTOR and RTOG capacity does not adequately accommodate the right-turn V/C, therefore the right-turn is essentially considered to be a critical movement. In such cases, the right-turn adjustment is noted on the ICU worksheet and it is included in the total capacity utilization value. When it is determined that a right-turn adjustment is required for more than one right-turn movement, the word "multi" is printed on the worksheet instead of an actual right-turn movement reference, and the right-turn adjustments are cumulatively added to the total capacity utilization value. In such cases, further operational evaluation is typically carried out to determine if under actual operational conditions, the critical right-turns would operate simultaneously, and therefore a right-turn adjustment credit should be applied.

Shared Lane V/C Methodology

For intersection approaches where shared usage of a lane is permitted by more than one turn movement (e.g., left/thru, thru/right, left/thru/right), the individual turn volumes are evaluated to

determine whether dedication of the shared lane is warranted to any one given turn movement. The following example demonstrates how this evaluation is carried out:

Example for Shared Left/Thru Lane

1. Average Lane Volume (ALV)

$$ALV = \frac{\text{Left-Turn Volume} + \text{Thru Volume}}{\text{Total Left} + \text{Thru Approach Lanes (including shared lane)}}$$

2. ALV for Each Approach

$$ALV (\text{Left}) = \frac{\text{Left-Turn Volume}}{\text{Left Approach Lanes (including shared lane)}}$$

$$ALV (\text{Thru}) = \frac{\text{Thru Volume}}{\text{Thru Approach Lanes (including shared lane)}}$$

3. Lane Dedication is Warranted

If ALV (Left) is greater than ALV then full dedication of the shared lane to the left-turn approach is warranted. Left-turn and thru V/C ratios for this case are calculated as follows:

$$V/C (\text{Left}) = \frac{\text{Left-Turn Volume}}{\text{Left Approach Capacity (including shared lane)}}$$

$$V/C (\text{Thru}) = \frac{\text{Thru Volume}}{\text{Thru Approach Capacity (excluding shared lane)}}$$

Similarly, if ALV (Thru) is greater than ALV then full dedication to the thru approach is warranted, and left-turn and thru V/C ratios are calculated as follows:

$$V/C (\text{Left}) = \frac{\text{Left-Turn Volume}}{\text{Left Approach Capacity (excluding shared lane)}}$$

$$V/C (\text{Thru}) = \frac{\text{Thru Volume}}{\text{Thru Approach Capacity (including shared lane)}}$$

4. Lane Dedication is not Warranted

If ALV (Left) and ALV (Thru) are both less than ALV, the left/thru lane is assumed to be truly shared and each left, left/thru or thru approach lane carries an evenly distributed volume of traffic equal to ALV. A combined left/thru V/C ratio is calculated as follows:

$$V/C \text{ (Left/Thru)} = \frac{\text{Left-Turn Volume} + \text{Thru Volume}}{\text{Total Left} + \text{Thru Approach Capacity (including shared lane)}}$$

This V/C (Left/Thru) ratio is assigned as the V/C (Thru) ratio for the critical movement analysis and ICU summary listing.

If split phasing has not been designated for this approach, the relative proportion of V/C (Thru) that is attributed to the left-turn volume is estimated as follows:

If approach has more than one left-turn (including shared lane), then:

$$V/C \text{ (Left)} = V/C \text{ (Thru)}$$

If approach has only one left-turn lane (shared lane), then:

$$V/C \text{ (Left)} = \frac{\text{Left-Turn Volume}}{\text{Single Approach Lane Capacity}}$$

If this left-turn movement is determined to be a critical movement, the V/C (Left) value is posted in brackets on the ICU summary printout.

These same steps are carried out for shared thru/right lanes. If full dedication of a shared thru/right lane to the right-turn movement is warranted, the right-turn V/C value calculated in step three is checked against the RTOR and RTOG capacity availability if the option to include right-turns in the V/C ratio calculations is selected. If the V/C value that is determined using the shared lane methodology described here is reduced due to RTOR and RTOG capacity availability, the V/C value for the thru/right lanes is posted in brackets.

When an approach contains more than one shared lane (e.g., left/thru and thru/right), steps one and two listed above are carried out for the three turn movements combined. Step four is carried out if dedication is not warranted for either of the shared lanes. If dedication of one of the shared lanes is warranted to one movement or another, step three is carried out for the two movements involved, and then steps one through four are repeated for the two movements involved in the other shared lane.

146. Lewis & Cerritos

Buildout with Project						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	1	1700	10	.01	100	.06*
NBT	2	3400	20	.01*	440	.13
NBR	1	1700	20	.01	150	.09
SBL	1	1700	240	.14*	40	.02
SBT	2	3400	380	.11	180	.11*
SBR	0	0	10		240	.14
EBL	1	1700	310	.18	50	.03*
EBT	2	3400	820	.27*	90	.03
EBR	0	0	90		20	
WBL	1	1700	70	.04*	60	.04
WBT	2	3400	280	.09	1060	.36*
WBR	0	0	30		150	
Right Turn Adjustment					SBR	.01*
Clearance Interval						.05*
TOTAL CAPACITY UTILIZATION			.51		.62	

147. Lewis & Katella

Buildout with Project						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	2	3400	50	.01*	80	.02
NBT	2	3400	10	.01	180	.06*
NBR	0	0	10		10	
SBL	2	3400	120	.04	100	.03*
SBT	2	3400	150	.09*	30	.02
SBR	0	0	230	.14	230	.14
EBL	2	3400	310	.09	170	.05*
EBT	4	6800	1390	.25*	940	.15
EBR	0	0	330		60	
WBL	1	1700	20	.01*	50	.03
WBT	4	6800	560	.09	2380	.37*
WBR	0	0	70		110	
Right Turn Adjustment					SBR	.03*
Clearance Interval						.05*
TOTAL CAPACITY UTILIZATION			.41		.59	

160. State College & Cerritos

Buildout with Project						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	1	1700	60	.04*	370	.22
NBT	3	5100	120	.03	2080	.43*
NBR	0	0	10		100	
SBL	1	1700	90	.05	160	.09*
SBT	3	5100	1210	.25*	930	.21
SBR	0	0	40		150	
EBL	1	1700	110	.06	10	.01*
EBT	2	3400	730	.26*	170	.07
EBR	0	0	170		70	
WBL	1	1700	100	.06*	100	.06
WBT	2	3400	200	.08	680	.26*
WBR	0	0	80		220	
Clearance Interval				.05*	.05*	
TOTAL CAPACITY UTILIZATION			.66		.84	

161. State College & Katella

Buildout with Project						
	LANES	CAPACITY	AM PK HOUR VOL	V/C	PM PK HOUR VOL	V/C
NBL	2	3400	90	.03*	460	.14
NBT	3	5100	310	.06	1730	.34*
NBR	1	1700	370	.22	460	.27
SBL	2	3400	270	.08	190	.06*
SBT	3	5100	1040	.22*	860	.20
SBR	0	0	80		170	
EBL	2	3400	430	.13	140	.04*
EBT	2.5	6800	1170	.23*	680	.13
EBR	1.5		250	.15	90	
WBL	2	3400	180	.05*	580	.17
WBT	4	6800	690	.12	1710	.31*
WBR	0	0	130		410	
Right Turn Adjustment			NBR	.01*		
Clearance Interval				.05*	.05*	
TOTAL CAPACITY UTILIZATION			.59		.80	

162. State College & Gene Autry
Buildout with Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	300	.18*	220	.13
NBT	3	5100	410	.10	2130	.45*
NBR	0	0	80		150	
SBL	1	1700	110	.06	150	.09*
SBT	3	5100	1290	.25*	1030	.30
SBR	0	0	10		500	
EBL	1.5		250		400	
EBT	1.5	5100	70	.09*	130	.14*
EBR	0		230	.14	180	
WBL	0	0	60	{.04}*	170	{.10}*
WBT	3	5100	50	.03	150	.08
WBR	0	0	50	.03	160	.09
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.61		.83

163. State College & Orangewood
Buildout with Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	2	3400	50	.01*	110	.03
NBT	4	6800	490	.07	1530	.23*
NBR	0	0	10		30	
SBL	2	3400	120	.04	90	.03*
SBT	3	5100	620	.12*	750	.15
SBR	1	1700	500	.29	810	.48
EBL	2	3400	300	.09*	730	.21*
EBT	3	5100	420	.11	660	.19
EBR	0	0	150		360	.21
WBL	2	3400	20	.01	80	.02
WBT	2	3400	570	.17*	660	.19*
WBR	1	1700	50	.03	330	.19
Right Turn Adjustment			SBR	.08*	SBR	.04*
Clearance Interval				.05*		.05*
Note: Assumes Right-Turn Overlap for SBR						
TOTAL CAPACITY UTILIZATION				.52		.75

176. SR-57 SB Ramps & Katella
Buildout with Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	0	0	0		0	
NBT	0	0	0		0	
NBR	0	0	0		0	
SBL	1.5		260	.15*	10	.01*
SBT	0	5100	0		0	
SBR	1.5		640	.19	540	.16
EBL	0	0	0		0	
EBT	3	5100	1510	.30*	2120	.42
EBR	f		240		330	
WBL	0	0	0		0	
WBT	3	5100	1200	.24	2530	.50*
WBR	f		480		730	
Right Turn Adjustment					SBR	.15*
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.50		.71

177. SR-57 NB Ramps & Katella
Buildout with Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1.5		270	.16*	730	.21*
NBT	0	5100	0		0	
NBR	1.5		950	.28	240	
SBL	0	0	0		0	
SBT	0	0	0		0	
SBR	0	0	0		0	
EBL	0	0	0		0	
EBT	3	5100	1600	.31	1320	.26
EBR	f		370		760	
WBL	0	0	0		0	
WBT	3	5100	1710	.34*	2380	.47*
WBR	1	1700	40	.02	400	.24
Right Turn Adjustment			NBR	.10*		
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.65		.73

307. SR-57 SB Ramps & Orangewood

Buildout with Project						
	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	0	0	0		0	
NBT	0	0	0		0	
NBR	0	0	0		0	
SBL	1.5		870		240	.14*
SBT	0	5100	0	.30*	0	
SBR	1.5		640		620	.18
EBL	0	0	0		0	
EBT	3	5100	1230	.24	1710	.39*
EBR	0	0	10		300	
WBL	1	1700	90	.05	80	.05*
WBT	2	3400	1110	.33*	1140	.34
WBR	0	0	0		0	
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.68		.63

308. SR-57 NB Ramps & Orangewood

Buildout with Project						
	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1.5		40	.02*	90	.03*
NBT	0	5100	0		0	
NBR	1.5		530	.16	140	{.02}
SBL	0	0	0		0	
SBT	0	0	0		0	
SBR	0	0	0		0	
EBL	0	0	0		0	
EBT	2	3400	1790	.53*	1080	.32
EBR	2	3400	320	.09	830	.24
WBL	0	0	0		0	
WBT	2	3400	920	.27	1350	.40*
WBR	1	1700	140	.08	280	.16
Right Turn Adjustment			NBR	.14*		
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.74		.48

APPENDIX D

Air Quality Model Calculations

URBEMIS 7G: Version 3.1

File Name: anaheim1.URB
 Project Name: Anaheim Stadium Master Plan, Without Indust
 Project Location: South Coast Air Basin (Los Angeles area)

DETAILED REPORT
 (Pounds/Day - Summer)

Total Land Use Area to be Developed (Estimated): 112 acres
 Detail/Office/Institutional Square Footage: 2450172
 Single Family Units 0 Multi-family Units 0

CONSTRUCTION EMISSION ESTIMATES

Source	ROG	NOx	CO	PM10
Demolition				0.00
Site Grading	11.65	89.09	-	346.92
Const. Worker Trips	7.63	10.79	20.47	2.07
Stationary Equip.	3.70	3.01	-	0.18
Mobile Equip. - Gas	0.00	0.00	-	0.00
Mobile Equip. - Diesel	31.68	502.48	-	31.06
Architectural Coatings	299.20			
Asphalt Offgasing	1.18			
TOTALS (ppd, unmitigated)	355.03	605.38	20.47	380.23

CONSTRUCTION EMISSION ESTIMATES

Source	ROG	NOx	CO	PM10
Demolition				0.00
Site Grading	11.07	84.63	-	108.42
Const. Worker Trips	7.63	10.79	20.47	2.07
Stationary Equip.	3.70	3.01	-	0.18
Mobile Equip. - Gas	0.00	0.00	-	0.00
Mobile Equip. - Diesel	30.10	477.36	-	29.51
Architectural Coatings	284.24			
Asphalt Offgasing	1.12			
TOTALS (ppd, mitigated)	337.85	575.80	20.47	140.18

Construction-Related Mitigation Measures

Soil Erosion Measures: Water Exposed Surfaces 2x Per Day:
 Percent Reduction(ROG 0% NOx 0% CO 0% PM10 68%)
 Properly Maintain Equipment:
 Percent Reduction(ROG 5% NOx 5% CO 0% PM10 5%)
 Implement Water/Paved Road Measures: Water All Haul Roads 2x Per Day:
 Percent Reduction(ROG 0% NOx 0% CO 0% PM10 3%)
 Reduce Speeds on Unpaved Roads to 15 mph or less:
 Percent Reduction(ROG 0% NOx 0% CO 0% PM10 70%)
 Mobile Equipment: Properly Maintain Equipment:
 Percent Reduction(ROG 5% NOx 5% CO 5% PM10 5%)
 Architectural Coatings: Use Low VOC Coatings:
 Percent Reduction(ROG 5% NOx 0% CO 0% PM10 0%)
 Asphalt Paving: Use Low VOC Asphalt:
 Percent Reduction(ROG 5% NOx 0% CO 0% PM10 0%)

AREA SOURCE EMISSION ESTIMATES (Summer Pounds per Day, Unmitigated)				
Source	ROG	NOx	CO	PM10
Natural Gas	1.28	17.65	7.06	0.03
Wood Stoves - No summer emissions				
Fireplaces - No summer emissions				
Landscaping	0.13	0.02	1.10	0.00
Consumer Prdcts	0.00			
TOTALS (ppd, unmitigated)	1.41	17.67	8.16	0.03

AREA SOURCE EMISSION ESTIMATES (Summer Pounds per Day, Mitigated)				
Source	ROG	NOx	CO	PM10
Natural Gas	0.18	2.49	7.06	0.00
Wood Stoves - No summer emissions				
Fireplaces - No summer emissions				
Landscaping	0.13	0.02	1.10	0.00
Consumer Prdcts	0.00			
TOTALS (ppd, mitigated)	0.31	2.51	8.16	0.01

Area Source Mitigation Measures

AREA SOURCE EMISSION ESTIMATES (Summer Pounds per Day, Unmitigated)

Source	ROG	NOx	CO	PM10
Natural Gas	1.28	17.65	7.06	0.03
Wood Stoves - No summer emissions				
Fireplaces - No summer emissions				
Landscaping	0.13	0.02	1.10	0.00
Consumer Prdcts	0.00			
TOTALS (ppd, unmitigated)	1.41	17.67	8.16	0.03

AREA SOURCE EMISSION ESTIMATES (Summer Pounds per Day, Mitigated)

Source	ROG	NOx	CO	PM10
Natural Gas	0.18	2.49	7.06	0.00
Wood Stoves - No summer emissions				
Fireplaces - No summer emissions				
Landscaping	0.13	0.02	1.10	0.00
Consumer Prdcts	0.00			
TOTALS (ppd, mitigated)	0.31	2.51	8.16	0.01

Area Source Mitigation Measures

OPERATIONAL (Vehicle) EMISSION ESTIMATES

Analysis Year: 2015 Temperature (F): 90 Season: Summer

EMFAC Version: EMFAC7G (10/96)

Summary of Land Uses:

Unit Type	Trip Rate	Size	Total Trips
Hotel	9.45 trips / Occupied room	1240.00	11,718.00
Regnl shop. center < 5	42.09 trips / 1000 sq. ft.	452.02	19,023.98
Office park	15.33 trips / 1000 sq. ft.	1871.29	28,687.06
General light industry	3.20 trips / 1000 sq. ft.	126.86	405.96

Vehicle Assumptions:

Fleet Mix:

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Duty Autos	75.00	1.16	98.58	0.26
Light Duty Trucks	10.00	0.13	99.54	0.33
Medium Duty Trucks	3.00	1.44	98.56	
Lite-Heavy Duty Trucks	1.00	19.56	40.00	40.44
Med.-Heavy Duty Trucks	1.00	19.56	40.00	40.44
Heavy-Heavy Trucks	5.00			100.00
Urban Buses	2.00			100.00
Motorcycles	3.00	100.00 % all fuels		

Travel Conditions

	Residential			Commercial		
	Home- Work	Home- Shop	Home- Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	10.6	4.5	5.6	9.5	5.1	5.1
Rural Trip Length (miles)	11.5	4.9	6.0	10.3	5.5	5.5
Trip Speeds (mph)	35	40	40	40	40	40
of Trips - Residential	20.0	37.0	43.0			
of Trips - Commercial (by land use)						
Hotel				5.0	2.5	92.5
Regnl shop. center < 570000 sf				2.0	1.0	97.0
Office park				48.0	24.0	28.0
General light industry				50.0	25.0	25.0

UNMITIGATED EMISSIONS

	ROG	NOx	CO	PM10
Hotel	54.92	154.90	465.52	74.39
Regnl shop. center < 5700	72.11	245.77	735.02	117.73
Office park	155.64	502.72	1588.29	247.59
General light industry	3.22	7.20	22.77	3.55
	ROG	NOx	CO	PM10
TOTAL EMISSIONS (lbs/day)	285.90	910.58	2811.60	443.25

Includes correction for passby trips.

Does not include double counting adjustment for internal trips.

MITIGATED EMISSIONS

	ROG	NOx	CO	PM10
Hotel	54.12	152.00	456.81	72.99
Regnl shop. center < 5700	70.82	241.09	721.06	115.50
Office park	153.44	494.64	1562.83	243.61
General light industry	3.19	7.08	22.41	3.49
	ROG	NOx	CO	PM10
TOTAL EMISSIONS (lbs/day)	281.58	894.81	2763.10	435.59

Includes correction for passby trips.

Does not include double counting adjustment for internal trips.

ENVIRONMENTAL FACTORS APPLICABLE TO THE PROJECT

Pedestrian Environment

Side Walks/Paths: No Sidewalks
Street Trees Provide Shade: No Coverage
Pedestrian Circulation Access: No Destinations
Visually Interesting Uses: No Interest
Street System Enhances Safety: No Streets Designed this Way
Pedestrian Safety from Crime: No Degree of Perceived Safety
Visually Interesting Walking Routes: No Visual Interest

3.8 <- Pedestrian Environmental Credit
3.8 /19 = 0.20 <- Pedestrian Effectiveness Factor

Transit Service

Transit Service: Dial-A-Ride or No Transit Service

0.0 <- Transit Effectiveness
3.8 <- Pedestrian Factor
3.8 <-Total
3.8 /110 = 0.03 <-Transit Effectiveness Factor

Bicycle Environment

Interconnected Bikeways: No Bikeway Coverage
Bike Routes Provide Paved Shoulders: No Routes Provide these Features
Safe Vehicle Speed Limits: No Routes
Safe School Routes: No Schools
Uses w/in Cycling Distance: No Uses
Bike Parking Ordinance: No Ordinance or Unenforceable

4.0 <- Bike Environmental Credit
4.0 /20 = 0.20 <- Bike Effectiveness Factor

MITIGATION MEASURES SELECTED FOR THIS PROJECT
(All mitigation measures are printed, even if
the selected land uses do not constitute a mixed use.)

Transit Infrastructure Measures

% Trips Reduced	Measure
15	Credit for Existing or Planned Community Transit Service
15	<- Totals

Pedestrian Enhancing Infrastructure Measures (Residential)

% Trips Reduced	Measure
2	Credit for Surrounding Pedestrian Environment
2	<- Totals

Pedestrian Enhancing Infrastructure Measures (Non-Residential)

% Trips Reduced	Measure
2	Credit for Surrounding Pedestrian Environment
2	<- Totals

Bicycle Enhancing Infratructure Measures (Residential)

% Trips Reduced	Measure
7	Credit for Surrounding Bicycle Environment
7	<- Totals

Bike Enhancing Infrastructure Measures (Non-Residential)

% Trips Reduced	Measure
5	Credit for Surrounding Area Bike Environment
5	<- Totals

Operational Measures (Applying to Commute Trips)

% Trips Reduced	Measure
0	<- Totals

Operational Measures (Applying to Employee Non-Commute Trips)

% Trips Reduced	Measure
0	<- Totals

Operational Measures (Applying to Customer Trips)

% Trips Reduced	Measure
0	<- Totals

Measures Reducing VMT (Non-Residential)

VMT Reduced	Measure
0	<- Totals

Measures Reducing VMT (Residential)

VMT Reduced	Measure
0	<- Totals

Total Percentage Trip Reduction
with Environmental Factors and Mitigation Measures

Travel Mode	Home-Work Trips	Home-Shop Trips	Home-Other Trips
Pedestrian	0.04	0.18	0.18
Transit	0.52	0.11	0.14
Bicycle	1.40	1.40	1.40
Totals	1.96	1.69	1.72

Travel Mode	Work Trips	Employee Trips	Customer Trips
Pedestrian	0.04	0.40	0.40
Transit	0.52	0.01	0.52
Bicycle	1.00	1.00	1.00
Other	0.00	0.00	0.00
Totals	1.56	1.41	1.92

Changes made to the default values

The demolition emissions option switch has been changed
The architectural coating defaults have been modified by the user.

URBEMIS 7G: Version 3.1

File Name: anaheim1.URB
 Project Name: Anaheim Stadium Master Plan, Indust Impact
 Project Location: South Coast Air Basin (Los Angeles area)

DETAILED REPORT
 (Pounds/Day - Summer)

Total Land Use Area to be Developed (Estimated): 23 acres
 Detail/Office/Institutional Square Footage: 491303
 Single Family Units 0 Multi-family Units 0

CONSTRUCTION EMISSION ESTIMATES

Source	ROG	NOx	CO	PM10
Demolition				0.00
Site Grading	11.65	89.09	-	346.92
Const. Worker Trips	0.00	0.00	0.00	0.00
Stationary Equip.	3.70	3.01	-	0.18
Mobile Equip. - Gas	0.00	0.00	-	0.00
Mobile Equip. - Diesel	31.68	502.48	-	31.06
Architectural Coatings	59.99			
Asphalt Offgasing	1.18			
TOTALS (ppd, unmitigated)	108.20	594.58	0.00	378.15

CONSTRUCTION EMISSION ESTIMATES

Source	ROG	NOx	CO	PM10
Demolition				0.00
Site Grading	11.07	84.63	-	108.42
Const. Worker Trips	0.00	0.00	0.00	0.00
Stationary Equip.	3.70	3.01	-	0.18
Mobile Equip. - Gas	0.00	0.00	-	0.00
Mobile Equip. - Diesel	30.10	477.36	-	29.51
Architectural Coatings	56.99			
Asphalt Offgasing	1.12			
TOTALS (ppd, mitigated)	102.97	565.00	0.00	138.11

Construction-Related Mitigation Measures

Soil Erosion Measures: Water Exposed Surfaces 2x Per Day:
 Percent Reduction(ROG 0% NOx 0% CO 0% PM10 68%)
 Properly Maintain Equipment:
 Percent Reduction(ROG 5% NOx 5% CO 0% PM10 5%)
 Implement Water/Paved Road Measures: Water All Haul Roads 2x Per Day:
 Percent Reduction(ROG 0% NOx 0% CO 0% PM10 3%)
 Reduce Speeds on Unpaved Roads to 15 mph or less:
 Percent Reduction(ROG 0% NOx 0% CO 0% PM10 70%)
 Mobile Equipment: Properly Maintain Equipment:
 Percent Reduction(ROG 5% NOx 5% CO 5% PM10 5%)
 Architectural Coatings: Use Low VOC Coatings:
 Percent Reduction(ROG 5% NOx 0% CO 0% PM10 0%)
 Asphalt Paving: Use Low VOC Asphalt:
 Percent Reduction(ROG 5% NOx 0% CO 0% PM10 0%)

AREA SOURCE EMISSION ESTIMATES (Summer Pounds per Day, Unmitigated)

Source	ROG	NOx	CO	PM10
Natural Gas	0.06	0.81	0.32	0.00
Wood Stoves - No summer emissions				
Fireplaces - No summer emissions				
Landscaping	0.03	0.00	0.28	0.00
Consumer Prdcts	0.00			
TOTALS (ppd, unmitigated)	0.09	0.81	0.60	0.00

AREA SOURCE EMISSION ESTIMATES (Summer Pounds per Day, Mitigated)

Source	ROG	NOx	CO	PM10
Natural Gas	0.06	0.81	0.32	0.00
Wood Stoves - No summer emissions				
Fireplaces - No summer emissions				
Landscaping	0.03	0.00	0.28	0.00
Consumer Prdcts	0.00			
TOTALS (ppd, mitigated)	0.09	0.81	0.60	0.00

Area Source Mitigation Measures

OPERATIONAL (Vehicle) EMISSION ESTIMATES

Analysis Year: 2015 Temperature (F): 90 Season: Summer

EMFAC Version: EMFAC7G (10/96)

Summary of Land Uses:

Unit Type	Trip Rate	Size	Total Trips
General light industry	6.97 trips / 1000 sq. ft.	491.30	3,423.99

Vehicle Assumptions:

Fleet Mix:

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Duty Autos	75.00	1.16	98.58	0.26
Light Duty Trucks	10.00	0.13	99.54	0.33
Medium Duty Trucks	3.00	1.44	98.56	
Lite-Heavy Duty Trucks	1.00	19.56	40.00	40.44
Med.-Heavy Duty Trucks	1.00	19.56	40.00	40.44
Heavy-Heavy Trucks	5.00			100.00
Urban Buses	2.00			100.00
Motorcycles	3.00	100.00 % all fuels		

Travel Conditions

	Residential			Commercial		
	Home- Work	Home- Shop	Home- Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	10.6	4.5	5.6	9.5	5.1	5.1
Rural Trip Length (miles)	11.5	4.9	6.0	10.3	5.5	5.5
Trip Speeds (mph)	35	40	40	40	40	40
% of Trips - Residential	20.0	37.0	43.0			
% of Trips - Commercial (by land use)						
General light industry				50.0	25.0	25.0

UNMITIGATED EMISSIONS

	ROG	NOx	CO	PM10
General light industry	21.43	60.69	192.06	29.91
TOTAL EMISSIONS (lbs/day)	21.43	60.69	192.06	29.91

Includes correction for passby trips.
Does not include double counting adjustment for internal trips.

MITIGATED EMISSIONS

	ROG	NOx	CO	PM10
General light industry	21.16	59.72	189.00	29.44
TOTAL EMISSIONS (lbs/day)	21.16	59.72	189.00	29.44

Includes correction for passby trips.
Does not include double counting adjustment for internal trips.

ENVIRONMENTAL FACTORS APPLICABLE TO THE PROJECT

Pedestrian Environment

0 Side Walks/Paths: No Sidewalks
0 Street Trees Provide Shade: No Coverage
0 Pedestrian Circulation Access: No Destinations
0 Visually Interesting Uses: No Interest
0 Street System Enhances Safety: No Streets Designed this Way
0 Pedestrian Safety from Crime: No Degree of Perceived Safety
0 Visually Interesting Walking Routes: No Visual Interest

3.8 <- Pedestrian Environmental Credit

3.8 /19 = 0.20 <- Pedestrian Effectiveness Factor

Transit Service

0 Transit Service: Dial-A-Ride or No Transit Service

0.0 <- Transit Effectiveness

3.8 <- Pedestrian Factor

3.8 <-Total

3.8 /110 = 0.03 <-Transit Effectiveness Factor

Bicycle Environment

0 Interconnected Bikeways: No Bikeway Coverage

0 Bike Routes Provide Paved Shoulders: No Routes Provide these Features

0 Safe Vehicle Speed Limits: No Routes

0 Safe School Routes: No Schools

0 Uses w/in Cycling Distance: No Uses

0 Bike Parking Ordinance: No Ordinance or Unenforceable

4.0 <- Bike Environmental Credit

4.0 /20 = 0.20 <- Bike Effectiveness Factor

MITIGATION MEASURES SELECTED FOR THIS PROJECT
(All mitigation measures are printed, even if
the selected land uses do not constitute a mixed use.)

Transit Infrastructure Measures

Trips Reduced	Measure
15	Credit for Existing or Planned Community Transit Service
15	<- Totals

Pedestrian Enhancing Infrastructure Measures (Residential)

Trips Reduced	Measure
2	Credit for Surrounding Pedestrian Environment
2	<- Totals

Pedestrian Enhancing Infrastructure Measures (Non-Residential)

Trips Reduced	Measure
2	Credit for Surrounding Pedestrian Environment
2	<- Totals

Bicycle Enhancing Infrastructure Measures (Residential)

Trips Reduced	Measure
7	Credit for Surrounding Bicycle Environment
7	<- Totals

Bike Enhancing Infrastructure Measures (Non-Residential)

Trips Reduced	Measure
5	Credit for Surrounding Area Bike Environment
5	<- Totals

Operational Measures (Applying to Commute Trips)

Trips Reduced	Measure
0	<- Totals

Operational Measures (Applying to Employee Non-Commute Trips)

Trips Reduced	Measure
0	<- Totals

Operational Measures (Applying to Customer Trips)

Trips Reduced	Measure
0	<- Totals

Measures Reducing VMT (Non-Residential)

VMT Reduced	Measure
0	<- Totals

Measures Reducing VMT (Residential)

VMT Reduced	Measure
0	<- Totals

Total Percentage Trip Reduction
with Environmental Factors and Mitigation Measures

Travel Mode	Home-Work Trips	Home-Shop Trips	Home-Other Trips
Pedestrian	0.04	0.18	0.18
Transit	0.52	0.11	0.14
Bicycle	1.40	1.40	1.40
Totals	1.96	1.69	1.72

Travel Mode	Work Trips	Employee Trips	Customer Trips
Pedestrian	0.04	0.40	0.40
Transit	0.52	0.01	0.52
Bicycle	1.00	1.00	1.00
Other	0.00	0.00	0.00
Totals	1.56	1.41	1.92

Changes made to the default values

The demolition emissions option switch has been changed

The architectural coating defaults have been modified by the user.

PREDICTED CALIFORNIA VEHICLE EMISSIONS
CARBON MONOXIDE PLANNING INVENTORY

RUN DATE: 09/14/98

SCENARIO TITLE: Year 2015 SCAB Emission Factors

YEAR: 2015 -- Model Years 1981 to 2015 inclusive
PER DAY

SOUTH COAST Air Basin

EMISSION UNIT: TONS

MVEI7G ver 1.0 /DAILY EMISSIONS

SEE COUNTY DETAIL FOR I & M STATUS

ALL ON-ROAD EMISSIONS

LIGHT DUTY AUTOMOBILES				LIGHT DUTY TRUCKS				MEDIUM DUTY TRUCKS				--- LIGHT HEAVY DUTY TRUCKS ---				--- MEDIUM HEAVY DUTY TRUCKS ---				HEAVY-HEAVY					
< 6,000 lbs				6,001 to 8,500 lbs				8,501 to 14,000 lbs				14,001 to 33,000 lbs				>33k lbs URBAN									
---- GAS ----		LDA		---- GAS ----		LDT		---- GAS ----		MDT		---- GASOLINE ----		LHDT		---- GASOLINE ----		MHDT		HHDT		DIESEL MOTOR- ALL			
NON-CAT	CAT	DIESEL	TOTAL	NON-CAT	CAT	DIESEL	TOTAL	NON-CAT	CAT	TOTAL	NON-CAT	CAT	TOTAL	DIESEL	TOTAL	NON-CAT	CAT	TOTAL	DIESEL	TOTAL	DIESEL	BUSES	CYCLES	VEHICLES	

NO. OF IN USE VEHS	0	8230154	5401	8235555	0	3638613	0	3638613	0	705158	705158	0	175858	175858	150386	326244	0	21125	21125	102305	123430	83065	3412	203852	13319329
DAILY VMT (X 1000)	0	242567	68	242635	0	108065	0	108065	0	20943	20943	0	8143	8143	5302	13445	0	1071	1071	6741	7812	12236	474	1601	407211
NO OF DAILY STARTS	0	44352345	21454	44373799	0	20639382	0	20639382	0	3692201	3692201	0	1573934	1573934	0	1573934	0	189069	189069	0	189069	0	0	128018	70596403

CARBON MONOXIDE EMISSIONS																									
RUNNING EXHAUST	0.00	548.48	0.13	548.61	0.00	285.18	0.00	285.18	0.00	72.36	72.36	0.00	57.78	57.78	27.11	84.89	0.00	16.84	16.84	52.49	69.33	109.99	0.88	16.46	1187.71
START EXHAUST	0.00	312.56	0.18	312.74	0.00	184.39	0.00	184.39	0.00	46.47	46.47	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.58	547.17	

TOTAL CO EMISSION	0.00	861.05	0.30	861.35	0.00	469.57	0.00	469.57	0.00	118.83	118.83	0.00	57.78	57.78	27.11	84.89	0.00	16.84	16.84	52.49	69.33	109.99	0.88	20.03	1734.89

POLLUTANT NAME: CARBON MONOXIDE

UNITS: GRAMS PER MILE

SPEED MPH	LIGHT DUTY AUTOS				LIGHT DUTY TRUCKS				MD. DUTY TRUCKS				LIGHT HEAVY TRUCKS				MEDIUM HEAVY TRUCKS				HH TRK		URBAN BUS	MCY
	NCAT	CAT	DIESEL		NCAT	CAT	DIESEL		NCAT	CAT	NCAT	CAT	DIESEL		NCAT	CAT	DIESEL		DIESEL	DIESEL	DIESEL	ALL		
5	0.00	8.15	6.37	0.00	9.19	0.00	0.00	11.86	0.00	27.18	18.44	0.00	60.23	28.08	32.41	7.62	52.98							
10	0.00	4.88	4.39	0.00	5.32	0.00	0.00	6.87	0.00	18.09	12.71	0.00	40.07	19.36	22.35	4.80	25.47							
15	0.00	3.35	3.17	0.00	3.69	0.00	0.00	4.76	0.00	12.71	9.17	0.00	28.17	13.97	16.13	3.21	16.72							
16	0.00	3.15	2.99	0.00	3.48	0.00	0.00	4.49	0.00	11.93	8.64	0.00	26.43	13.16	15.19	2.98	15.72							
20	0.00	2.55	2.39	0.00	2.86	0.00	0.00	3.70	0.00	9.44	6.93	0.00	20.92	10.55	12.18	2.28	12.83							
25	0.00	2.07	1.89	0.00	2.39	0.00	0.00	3.08	0.00	7.41	5.48	0.00	16.42	8.34	9.63	1.71	10.50							
30	0.00	1.78	1.57	0.00	2.07	0.00	0.00	2.67	0.00	6.14	4.53	0.00	13.61	6.90	7.96	1.37	8.82							
35	0.00	1.59	1.35	0.00	1.85	0.00	0.00	2.38	0.00	5.38	3.92	0.00	11.92	5.97	6.89	1.17	7.55							
40	0.00	1.48	1.23	0.00	1.70	0.00	0.00	2.19	0.00	4.98	3.55	0.00	11.03	5.41	6.25	1.05	6.66							
45	0.00	1.46	1.16	0.00	1.64	0.00	0.00	2.11	0.00	4.87	3.37	0.00	10.79	5.13	5.92	1.01	6.14							
50	0.00	1.55	1.15	0.00	1.72	0.00	0.00	2.22	0.00	5.03	3.34	0.00	11.14	5.09	5.88	1.02	5.90							
55	0.00	1.83	1.20	0.00	2.08	0.00	0.00	2.68	0.00	5.49	3.47	0.00	12.16	5.29	6.10	1.11	5.71							
60	0.00	2.51	1.30	0.00	3.08	0.00	0.00	3.98	0.00	6.33	3.77	0.00	14.02	5.74	6.63	1.27	5.13							
65	0.00	4.24	1.48	0.00	6.10	0.00	0.00	7.89	0.00	7.71	4.29	0.00	17.09	6.53	7.54	1.55	3.68							

POLLUTANT NAME: CARBON MONOXIDE

UNITS: GRAMS PER TRIP

[illegible]

POLLUTANT NAME: CARBON MONOXIDE

POLLUTANT NAME: CARBON MONOXIDE

30	0.00	1.15	N/A	0.00	1.13	N/A	0.00	1.13	0.00	1.24	N/A	0.00	1.24	N/A	N/A	N/A	1.07
40	0.00	1.10	N/A	0.00	1.09	N/A	0.00	1.09	0.00	1.15	N/A	0.00	1.15	N/A	N/A	N/A	1.07
50	0.00	1.06	N/A	0.00	1.06	N/A	0.00	1.06	0.00	1.07	N/A	0.00	1.07	N/A	N/A	N/A	1.06
60	0.00	1.05	N/A	0.00	1.05	N/A	0.00	1.05	0.00	0.99	N/A	0.00	0.99	N/A	N/A	N/A	1.06
70	0.00	1.05	N/A	0.00	1.05	N/A	0.00	1.05	0.00	0.91	N/A	0.00	0.91	N/A	N/A	N/A	1.05
75	0.00	1.06	N/A	0.00	1.06	N/A	0.00	1.06	0.00	0.88	N/A	0.00	0.88	N/A	N/A	N/A	1.05
85	0.00	1.11	N/A	0.00	1.10	N/A	0.00	1.10	0.00	1.15	N/A	0.00	1.15	N/A	N/A	N/A	1.35
90	0.00	1.14	N/A	0.00	1.14	N/A	0.00	1.14	0.00	1.32	N/A	0.00	1.32	N/A	N/A	N/A	1.52
95	0.00	1.18	N/A	0.00	1.18	N/A	0.00	1.18	0.00	1.51	N/A	0.00	1.51	N/A	N/A	N/A	1.73
100	0.00	1.24	N/A	0.00	1.23	N/A	0.00	1.23	0.00	1.73	N/A	0.00	1.73	N/A	N/A	N/A	1.95
105	0.00	1.30	N/A	0.00	1.29	N/A	0.00	1.29	0.00	1.98	N/A	0.00	1.98	N/A	N/A	N/A	2.21
110	0.00	1.38	N/A	0.00	1.36	N/A	0.00	1.36	0.00	2.26	N/A	0.00	2.26	N/A	N/A	N/A	2.50

POLLUTANT NAME: CARBON MONOXIDE

POLLUTANT NAME: CARBON MONOXIDE

[illegible]

Vehicle Class	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	1
% of Fleet	0	0.595679	0.000167	0	0.265378	0.05143	0	0.019997	0	0.01302	0	0	0.00263	0.016554	0.030048	0.001164	0.003932	
Total Miles	407211																	
Miles per Cl	0	242567	68	0	108065	20943	0	8143	0	5302	0	0	1071	6741	12236	474	1601	407211 <-Check Value
Run Temp *	1	1.1	1	1	1.09	1	1	1.09	1	1.15	1	1	1.15	1	1	1	1.07	
Start Temp *	1	1.19	1	1	1.25	1	1	1.25	1	1	1	1	1	1	1	1	0.4	
Cold Start	0	6.39	7.62	0	8.11	0	0	11.43	0	0	0	0	0	0	0	0	25.39	Run Emission (gm/mi)
% Starts	32.5																	Start Emissions
5 mph	0	8.15	6.37	0	9.19	0	0	11.86	0	27.18	18.44	0	60.23	28.08	32.41	7.62	52.98	10.51775
6 mph																		2.452705
7 mph																		12.97046
8 mph																		12.14367
9 mph																		8.864181
10 mph	0	4.88	4.39	0	5.32	0	0	6.87	0	18.09	12.71	0	40.07	19.36	22.35	4.8	25.47	11.31689
11 mph																		8.037395
12 mph																		10.4901
13 mph																		7.210609
14 mph																		9.663313
15 mph	0	3.35	3.17	0	3.69	0	0	4.76	0	12.71	9.17	0	28.17	13.97	16.13	3.21	16.72	6.383822
16 mph																		8.836527
17 mph																		5.993511
18 mph																		8.446216
19 mph																		5.603199
20 mph	0	2.55	2.39	0	2.86	0	0	3.7	0	9.44	6.93	0	20.92	10.55	12.18	2.28	12.83	8.055904
21 mph																		5.212888
22 mph																		7.665593
23 mph																		4.822577
24 mph																		7.275281
25 mph	0	2.07	1.89	0	2.39	0	0	3.08	0	7.41	5.48	0	16.42	8.34	9.63	1.71	10.5	6.88497
26 mph																		4.432265
27 mph																		4.222032
28 mph																		4.0118
29 mph																		6.674737
30 mph	0	1.78	1.57	0	2.07	0	0	2.67	0	6.14	4.53	0	13.61	6.9	7.96	1.37	8.82	6.464505
31 mph																		3.801567
32 mph																		3.591334
33 mph																		6.254272
34 mph	0	1.59	1.35	0	1.85	0	0	2.38	0	5.38	3.92	0	11.92	5.97	6.89	1.17	7.55	6.044039
35 mph																		3.381101
																		3.254751
																		3.128402
																		3.002052
																		2.875702
																		2.749352
																		2.669238
																		2.589123
																		2.509009
																		2.428894
																		2.34878
																		2.295958
																		2.243137
																		2.190316
																		2.137495
																		2.084673

SCAB Composite CO Emissions for Year 2015

Vehicle Class 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 1

% of Fleet 0 0.595679 0.000167 0 0.265378 0.05143 0 0.019997 0 0.01302 0 0 0.00263 0.016554 0.030048 0.001164 0.003932

Total Miles 407211

Miles per Cl 0 242567 68 0 108065 20943 0 8143 0 5302 0 0 0 1071 6741 12236 474 1601 407211 <-Check Value

Run Temp * 1 1.1 1 1 1.09 1 1 1.09 1 1.15 1 1 1.15 1 1 1 1.07

Start Temp * 1 1.19 1 1 1.25 1 1 1.25 1 1 1 1 1 1 1 1 0.4

Cold Start 0 6.39 7.62 0 8.11 0 0 11.43 0 0 0 0 0 0 0 0 0 25.39 Run Emission (gm/mi) Start Emissions Total Emissions

% Starts 32.5

5 mph 0 8.15 6.37 0 9.19 0 0 11.86 0 27.18 18.44 0 60.23 28.08 32.41 7.62 52.98 10.51775 2.452705 12.97046

6 mph 9.690968 12.14367

7 mph 8.864181 11.31689

8 mph 8.037395 10.4901

9 mph 7.210609 9.663313

10 mph 0 4.88 4.39 0 5.32 0 0 6.87 0 18.09 12.71 0 40.07 19.36 22.35 4.8 25.47 6.383822 8.836527

11 mph 5.993511 8.446216

12 mph 5.603199 8.055904

13 mph 5.212888 7.665593

14 mph 4.822577 7.275281

15 mph 0 3.35 3.17 0 3.69 0 0 4.76 0 12.71 9.17 0 28.17 13.97 16.13 3.21 16.72 4.432265 6.88497

16 mph 4.222032 6.674737

17 mph 4.0118 6.464505

18 mph 3.801567 6.254272

19 mph 3.591334 6.044039

20 mph 0 2.55 2.39 0 2.86 0 0 3.7 0 9.44 6.93 0 20.92 10.55 12.18 2.28 12.83 3.381101 5.833806

21 mph 3.254751 5.707456

22 mph 3.128402 5.581107

23 mph 3.002052 5.454757

24 mph 2.875702 5.328407

25 mph 0 2.07 1.89 0 2.39 0 0 3.08 0 7.41 5.48 0 16.42 8.34 9.63 1.71 10.5 2.749352 5.202057

26 mph 2.669238 5.121943

27 mph 2.589123 5.041828

28 mph 2.509009 4.961714

29 mph 2.428894 4.881599

30 mph 0 1.78 1.57 0 2.07 0 0 2.67 0 6.14 4.53 0 13.61 6.9 7.96 1.37 8.82 2.34878 4.801485

31 mph 2.295958 4.748663

32 mph 2.243137 4.695842

33 mph 2.190316 4.643021

34 mph 2.137495 4.5902

35 mph 0 1.59 1.35 0 1.85 0 0 2.38 0 5.38 3.92 0 11.92 5.97 6.89 1.17 7.55 2.084673 4.537378

REPORT FOR FILE : STCLCENP

1. Site Variables

U=	0.5 M/S	ZO=	108.0 CM
BRG=	0.0 DEGREES	VD=	0.0 CM/S
CLASS=	G STABILITY	VS=	0.0 CM/S
MIXH=	1000.0 M	AMB=	0.0 PPM
SIGTH=	10.0 DEGREES	TEMP=	4.0 DEGREE (C)

2. Link Description

LINK	* DESCRIPTION	* X1	LINK COORDINATES (M)	Y1	X2	Y2	* TYPE	VPH	EF (G/MI)	H (M)	W (M)
A.	ST COL NB	7	-500	7	-87	AG	2650	4.8	0.0	20.6	
B.	ST COL NB	7	-87	7	0	AG	2650	9.7	0.0	20.6	
C.	ST COL NB	7	0	7	61	AG	2360	5.3	0.0	20.6	
D.	ST COL NB	7	61	7	500	AG	2360	4.8	0.0	20.6	
E.	ST COL SB	-7	500	-7	87	AG	1140	4.8	0.0	20.6	
F.	ST COL SB	-7	87	-7	0	AG	1140	6.7	0.0	20.6	
G.	ST COL SB	-7	0	-7	-61	AG	1090	5.0	0.0	20.6	
H.	ST COL SB	-7	-61	-7	-500	AG	1090	4.8	0.0	20.6	
I.	CRRTOS EB	-500	-5	-87	-5	AG	280	4.8	0.0	17.0	
J.	CRRTOS EB	-87	-5	0	-5	AG	280	11.3	0.0	17.0	
K.	CRRTOS EB	0	-5	61	-5	AG	330	5.6	0.0	17.0	
L.	CRRTOS EB	61	-5	500	-5	AG	330	4.8	0.0	17.0	
M.	CRRTOS WB	500	5	87	5	AG	670	4.8	0.0	17.0	
N.	CRRTOS WB	87	5	0	5	AG	670	13.0	0.0	17.0	
O.	CRRTOS WB	0	5	-61	5	AG	960	9.7	0.0	17.0	
P.	CRRTOS WB	-61	5	-500	5	AG	960	9.7	0.0	17.0	

LINK	* L (M)	* R (M)	MIXW	STPL (M)	DCLT (SEC)	ACCT (SEC)	SPD (MPH)	NCYC	NDLA	VPHO	EFI (G/MIN)	IDT1 (SEC)	IDT2 (SEC)
A.	0	0	0	0.0	0.0	0	0	0	0	0.0	0.0	0.0	
B.	0	0	0	0.0	0.0	0	0	0	0	0.0	0.0	0.0	
C.	0	0	0	0.0	0.0	0	0	0	0	0.0	0.0	0.0	
D.	0	0	0	0.0	0.0	0	0	0	0	0.0	0.0	0.0	
E.	0	0	0	0.0	0.0	0	0	0	0	0.0	0.0	0.0	
F.	0	0	0	0.0	0.0	0	0	0	0	0.0	0.0	0.0	
G.	0	0	0	0.0	0.0	0	0	0	0	0.0	0.0	0.0	
H.	0	0	0	0.0	0.0	0	0	0	0	0.0	0.0	0.0	
I.	0	0	0	0.0	0.0	0	0	0	0	0.0	0.0	0.0	
J.	0	0	0	0.0	0.0	0	0	0	0	0.0	0.0	0.0	
K.	0	0	0	0.0	0.0	0	0	0	0	0.0	0.0	0.0	
L.	0	0	0	0.0	0.0	0	0	0	0	0.0	0.0	0.0	
M.	0	0	0	0.0	0.0	0	0	0	0	0.0	0.0	0.0	
N.	0	0	0	0.0	0.0	0	0	0	0	0.0	0.0	0.0	
O.	0	0	0	0.0	0.0	0	0	0	0	0.0	0.0	0.0	
P.	0	0	0	0.0	0.0	0	0	0	0	0.0	0.0	0.0	

3. Receptor Coordinates

X

Y

Z

RECEPTOR	1	30	26	1.3
RECEPTOR	2	30	-26	1.3
RECEPTOR	3	-30	-26	1.3
RECEPTOR	4	-30	26	1.3

REPORT FOR FILE : STCLGANP

1. Site Variables

U=	0.5 M/S	ZO=	108.0 CM
BRG=	0.0 DEGREES	VD=	0.0 CM/S
CLASS=	G STABILITY	VS=	0.0 CM/S
MIXH=	1000.0 M	AMB=	0.0 PPM
SIGTH=	10.0 DEGREES	TEMP=	4.0 DEGREE (C)

2. Link Description

LINK	* DESCRIPTION	* X1	LINK COORDINATES (M)	Y1	X2	Y2	* TYPE	VPH	EF (G/MI)	H (M)	W (M)
A.	ST COL NB	7	-500	7	-87	AG	2720	4.8	0.0	20.6	
B.	ST COL NB	7	-87	7	0	AG	2720	9.7	0.0	20.6	
C.	ST COL NB	7	0	7	61	AG	2670	5.5	0.0	20.6	
D.	ST COL NB	7	61	7	500	AG	2670	4.8	0.0	20.6	
E.	ST COL SB	-7	500	-7	87	AG	2000	4.8	0.0	20.6	
F.	ST COL SB	-7	87	-7	0	AG	2000	8.1	0.0	20.6	
G.	ST COL SB	-7	0	-7	-61	AG	1800	5.1	0.0	20.6	
H.	ST COL SB	-7	-61	-7	-500	AG	1800	4.8	0.0	20.6	
I.	GNE ATY EB	-500	-5	-87	-5	AG	620	4.8	0.0	17.0	
J.	GNE ATY EB	-87	-5	0	-5	AG	620	12.1	0.0	17.0	
K.	GNE ATY EB	0	-5	61	-5	AG	430	5.8	0.0	17.0	
L.	GNE ATY EB	61	-5	500	-5	AG	430	4.8	0.0	17.0	
M.	GNE ATY WB	500	5	87	5	AG	480	4.8	0.0	17.0	
N.	GNE ATY WB	87	5	0	5	AG	480	11.3	0.0	17.0	
O.	GNE ATY WB	0	5	-61	5	AG	920	5.8	0.0	17.0	
P.	GNE ATY WB	-61	5	-500	5	AG	920	4.8	0.0	17.0	

LINK	* L (M)	* R (M)	MIXW	STPL (M)	DCLT (SEC)	ACCT (SEC)	SPD (MPH)	NCYC	NDLA	VPHO	EFI (G/MIN)	IDT1 (SEC)	IDT2 (SEC)
A.	0	0		0	0.0	0.0	0	0	0	0	0.0	0.0	0.0
B.	0	0		0	0.0	0.0	0	0	0	0	0.0	0.0	0.0
C.	0	0		0	0.0	0.0	0	0	0	0	0.0	0.0	0.0
D.	0	0		0	0.0	0.0	0	0	0	0	0.0	0.0	0.0
E.	0	0		0	0.0	0.0	0	0	0	0	0.0	0.0	0.0
F.	0	0		0	0.0	0.0	0	0	0	0	0.0	0.0	0.0
G.	0	0		0	0.0	0.0	0	0	0	0	0.0	0.0	0.0
H.	0	0		0	0.0	0.0	0	0	0	0	0.0	0.0	0.0
I.	0	0		0	0.0	0.0	0	0	0	0	0.0	0.0	0.0
J.	0	0		0	0.0	0.0	0	0	0	0	0.0	0.0	0.0
K.	0	0		0	0.0	0.0	0	0	0	0	0.0	0.0	0.0
L.	0	0		0	0.0	0.0	0	0	0	0	0.0	0.0	0.0
M.	0	0		0	0.0	0.0	0	0	0	0	0.0	0.0	0.0
N.	0	0		0	0.0	0.0	0	0	0	0	0.0	0.0	0.0
O.	0	0		0	0.0	0.0	0	0	0	0	0.0	0.0	0.0
P.	0	0		0	0.0	0.0	0	0	0	0	0.0	0.0	0.0

3. Receptor Coordinates

		X	Y	Z
RECEPTOR	1	30	26	1.3
RECEPTOR	2	30	-26	1.3
RECEPTOR	3	-30	-26	1.3
RECEPTOR	4	-30	26	1.3

MODEL RESULTS FOR FILE STCLCENP

		* PRED	*WIND *	COCN/LINK									
		* CONC	* BRG *	(PPM)									
RECEPTOR		* (PPM)	*(DEG)*	A	B	C	D	E	F	G	H		
RECPT	1	*	1.8	* 193 *	0.3	0.9	0.0	0.0	0.0	0.0	0.0	0.2	
RECPT	2	*	1.8	* 281 *	0.0	0.9	0.0	0.0	0.0	0.0	0.1	0.0	
RECPT	3	*	1.3	* 66 *	0.0	0.6	0.0	0.0	0.0	0.0	0.2	0.0	
RECPT	4	*	1.6	* 148 *	0.0	0.8	0.0	0.0	0.0	0.1	0.2	0.0	

		* PRED	*WIND *	COCN/LINK									
		* CONC	* BRG *	(PPM)									
RECEPTOR		* (PPM)	*(DEG)*	I	J	K	L	M	N	O	P		
RECPT	1	*	1.8	* 193 *	0.0	0.0	0.1	0.0	0.0	0.3	0.0	0.0	
RECPT	2	*	1.8	* 281 *	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.4	
RECPT	3	*	1.3	* 66 *	0.0	0.0	0.1	0.0	0.0	0.3	0.0	0.0	
RECPT	4	*	1.6	* 148 *	0.0	0.1	0.0	0.0	0.0	0.0	0.4	0.0	

MODEL RESULTS FOR FILE STCLGANP

		* PRED	*WIND *	COCN/LINK									
		* CONC	* BRG *	(PPM)									
RECEPTOR		* (PPM)	*(DEG)*	A	B	C	D	E	F	G	H		
RECPT	1	*	1.9	* 193 *	0.3	0.9	0.0	0.0	0.0	0.0	0.0	0.4	
RECPT	2	*	1.8	* 284 *	0.0	0.9	0.0	0.0	0.0	0.0	0.2	0.0	
RECPT	3	*	1.8	* 13 *	0.0	0.0	0.0	0.5	0.2	0.6	0.0	0.0	
RECPT	4	*	1.8	* 148 *	0.0	0.8	0.0	0.0	0.0	0.2	0.3	0.0	

		* PRED	*WIND *	COCN/LINK									
		* CONC	* BRG *	(PPM)									
RECEPTOR		* (PPM)	*(DEG)*	I	J	K	L	M	N	O	P		
RECPT	1	*	1.9	* 193 *	0.0	0.0	0.1	0.0	0.0	0.2	0.0	0.0	
RECPT	2	*	1.8	* 284 *	0.1	0.4	0.0	0.0	0.0	0.0	0.1	0.2	
RECPT	3	*	1.8	* 13 *	0.0	0.3	0.0	0.0	0.0	0.0	0.2	0.0	
RECPT	4	*	1.8	* 148 *	0.0	0.2	0.0	0.0	0.0	0.0	0.2	0.0	

REPORT FOR FILE : STCLCEWP

1. Site Variables

U=	0.5 M/S	ZO=	108.0 CM
BRG=	0.0 DEGREES	VD=	0.0 CM/S
CLASS=	G STABILITY	VS=	0.0 CM/S
MIXH=	1000.0 M	AMB=	0.0 PPM
SIGTH=	10.0 DEGREES	TEMP=	4.0 DEGREE (C)

2. Link Description

LINK	* DESCRIPTION	* X1	LINK COORDINATES (M) Y1	X2	Y2	* TYPE	VPH	EF (G/MI)	H (M)	W (M)
A.	ST COL NB	7	-500	7	-87	AG	2550	4.8	0.0	20.6
B.	ST COL NB	7	-87	7	0	AG	2550	9.7	0.0	20.6
C.	ST COL NB	7	0	7	61	AG	2310	5.3	0.0	20.6
D.	ST COL NB	7	61	7	500	AG	2310	4.8	0.0	20.6
E.	ST COL SB	-7	500	-7	87	AG	1240	4.8	0.0	20.6
F.	ST COL SB	-7	87	-7	0	AG	1240	6.9	0.0	20.6
G.	ST COL SB	-7	0	-7	-61	AG	1100	5.0	0.0	20.6
H.	ST COL SB	-7	-61	-7	-500	AG	1100	4.8	0.0	20.6
I.	CRRTOS EB	-500	-5	-87	-5	AG	250	4.8	0.0	17.0
J.	CRRTOS EB	-87	-5	0	-5	AG	250	11.3	0.0	17.0
K.	CRRTOS EB	0	-5	61	-5	AG	430	5.8	0.0	17.0
L.	CRRTOS EB	61	-5	500	-5	AG	430	4.8	0.0	17.0
M.	CRRTOS WB	500	5	87	5	AG	1000	4.8	0.0	17.0
N.	CRRTOS WB	87	5	0	5	AG	1000	13.0	0.0	17.0
O.	CRRTOS WB	0	5	-61	5	AG	1200	13.0	0.0	17.0
P.	CRRTOS WB	-61	5	-500	5	AG	1200	4.8	0.0	17.0

LINK	* L (M)	MIXW * R (M)	STPL (M)	DCLT (SEC)	ACCT (SEC)	SPD (MPH)	NCYC	NDLA	VPHO	EFI (G/MIN)	IDT1 (SEC)	IDT2 (SEC)
A.	0	0	0	0.0	0.0	0	0	0	0	0.0	0.0	0.0
B.	0	0	0	0.0	0.0	0	0	0	0	0.0	0.0	0.0
C.	0	0	0	0.0	0.0	0	0	0	0	0.0	0.0	0.0
D.	0	0	0	0.0	0.0	0	0	0	0	0.0	0.0	0.0
E.	0	0	0	0.0	0.0	0	0	0	0	0.0	0.0	0.0
F.	0	0	0	0.0	0.0	0	0	0	0	0.0	0.0	0.0
G.	0	0	0	0.0	0.0	0	0	0	0	0.0	0.0	0.0
H.	0	0	0	0.0	0.0	0	0	0	0	0.0	0.0	0.0
I.	0	0	0	0.0	0.0	0	0	0	0	0.0	0.0	0.0
J.	0	0	0	0.0	0.0	0	0	0	0	0.0	0.0	0.0
K.	0	0	0	0.0	0.0	0	0	0	0	0.0	0.0	0.0
L.	0	0	0	0.0	0.0	0	0	0	0	0.0	0.0	0.0
M.	0	0	0	0.0	0.0	0	0	0	0	0.0	0.0	0.0
N.	0	0	0	0.0	0.0	0	0	0	0	0.0	0.0	0.0
O.	0	0	0	0.0	0.0	0	0	0	0	0.0	0.0	0.0
P.	0	0	0	0.0	0.0	0	0	0	0	0.0	0.0	0.0

3. Receptor Coordinates

		X	Y	Z
RECEPTOR	1	30	26	1.3
RECEPTOR	2	30	-26	1.3
RECEPTOR	3	-30	-26	1.3
RECEPTOR	4	-30	26	1.3

REPORT FOR FILE : STCLGAWP

1. Site Variables

U=	0.5 M/S	ZO=	108.0 CM
BRG=	0.0 DEGREES	VD=	0.0 CM/S
CLASS=	G STABILITY	VS=	0.0 CM/S
MIXH=	1000.0 M	AMB=	0.0 PPM
SIGTH=	10.0 DEGREES	TEMP=	4.0 DEGREE (C)

2. Link Description

LINK	*	LINK COORDINATES (M)				*		EF	H	W
DESCRIPTION	*	X1	Y1	X2	Y2	* TYPE	VPH	(G/MI)	(M)	(M)
A. ST COL NB		7	-500	7	-87	AG	2500	4.8	0.0	20.6
B. ST COL NB		7	-87	7	0	AG	2500	9.7	0.0	20.6
C. ST COL NB		7	0	7	61	AG	2690	5.5	0.0	20.6
D. ST COL NB		7	61	7	500	AG	2690	4.8	0.0	20.6
E. ST COL SB		-7	500	-7	87	AG	1680	4.8	0.0	20.6
F. ST COL SB		-7	87	-7	0	AG	1680	7.3	0.0	20.6
G. ST COL SB		-7	0	-7	-61	AG	1380	5.1	0.0	20.6
H. ST COL SB		-7	-61	-7	-500	AG	1380	4.8	0.0	20.6
I. GNE ATY EB		-500	-5	-87	-5	AG	710	4.8	0.0	17.0
J. GNE ATY EB		-87	-5	0	-5	AG	710	13.0	0.0	17.0
K. GNE ATY EB		0	-5	61	-5	AG	430	5.8	0.0	17.0
L. GNE ATY EB		61	-5	500	-5	AG	430	4.8	0.0	17.0
M. GNE ATY WB		500	5	87	5	AG	480	4.8	0.0	17.0
N. GNE ATY WB		87	5	0	5	AG	480	11.3	0.0	17.0
O. GNE ATY WB		0	5	-61	5	AG	870	5.8	0.0	17.0
P. GNE ATY WB		-61	5	-500	5	AG	870	4.8	0.0	17.0

LINK	*	MIXW		STPL	DCLT	ACCT	SPD	NCYC	NDLA	VPHO	EFI	IDT1	IDT2
	*	L (M)	R (M)	(M)	(SEC)	(SEC)	(MPH)				(G/MIN)	(SEC)	(SEC)
A.		0	0	0	0.0	0.0	0	0	0	0	0.0	0.0	0.0
B.		0	0	0	0.0	0.0	0	0	0	0	0.0	0.0	0.0
C.		0	0	0	0.0	0.0	0	0	0	0	0.0	0.0	0.0
D.		0	0	0	0.0	0.0	0	0	0	0	0.0	0.0	0.0
E.		0	0	0	0.0	0.0	0	0	0	0	0.0	0.0	0.0
F.		0	0	0	0.0	0.0	0	0	0	0	0.0	0.0	0.0
G.		0	0	0	0.0	0.0	0	0	0	0	0.0	0.0	0.0
H.		0	0	0	0.0	0.0	0	0	0	0	0.0	0.0	0.0
I.		0	0	0	0.0	0.0	0	0	0	0	0.0	0.0	0.0
J.		0	0	0	0.0	0.0	0	0	0	0	0.0	0.0	0.0
K.		0	0	0	0.0	0.0	0	0	0	0	0.0	0.0	0.0
L.		0	0	0	0.0	0.0	0	0	0	0	0.0	0.0	0.0
M.		0	0	0	0.0	0.0	0	0	0	0	0.0	0.0	0.0
N.		0	0	0	0.0	0.0	0	0	0	0	0.0	0.0	0.0
O.		0	0	0	0.0	0.0	0	0	0	0	0.0	0.0	0.0
P.		0	0	0	0.0	0.0	0	0	0	0	0.0	0.0	0.0

3. Receptor Coordinates

		X	Y	Z
RECEPTOR	1	30	26	1.3
RECEPTOR	2	30	-26	1.3
RECEPTOR	3	-30	-26	1.3
RECEPTOR	4	-30	26	1.3

MODEL RESULTS FOR FILE STCLCEWP

		* PRED	*WIND	*	COCN/LINK									
		* CONC	* BRG	*	(PPM)									
RECEPTOR		* (PPM)	*(DEG)	*	A	B	C	D	E	F	G	H		
-----*														
RECPT	1	*	2.0	* 193	*	0.3	0.9	0.0	0.0	0.0	0.0	0.0	0.2	
RECPT	2	*	1.8	* 303	*	0.0	0.9	0.0	0.0	0.0	0.1	0.1	0.0	
RECPT	3	*	1.5	* 12	*	0.0	0.0	0.0	0.4	0.2	0.3	0.0	0.0	
RECPT	4	*	1.8	* 148	*	0.0	0.8	0.0	0.0	0.0	0.1	0.2	0.0	

		* PRED	*WIND	COCN/LINK										
		* CONC	* BRG	(PPM)										
RECEPTOR		* (PPM)	*(DEG)	*	I	J	K	L	M	N	O	P		
RECPT	1	*	2.0	* 193	*	0.0	0.0	0.1	0.0	0.0	0.5	0.0	0.0	
RECPT	2	*	1.8	* 303	*	0.0	0.1	0.1	0.0	0.0	0.0	0.5	0.0	
RECPT	3	*	1.5	* 12	*	0.0	0.1	0.0	0.0	0.0	0.0	0.5	0.0	
RECPT	4	*	1.8	* 148	*	0.0	0.1	0.0	0.0	0.0	0.0	0.6	0.0	

MODEL RESULTS FOR FILE STCLGAWP

		* PRED	*WIND	*	COCN/LINK									
		* CONC	* BRG	*	(PPM)									
RECEPTOR		* (PPM)	*(DEG)	*	A	B	C	D	E	F	G	H		

RECPT	1	*	1.7	*	193	*	0.2	0.9	0.0	0.0	0.0	0.0	0.0	0.3
RECPT	2	*	1.8	*	284	*	0.0	0.9	0.0	0.0	0.0	0.0	0.2	0.0
RECPT	3	*	1.7	*	12	*	0.0	0.0	0.0	0.5	0.2	0.4	0.0	0.0
RECPT	4	*	1.6	*	148	*	0.0	0.8	0.0	0.0	0.0	0.2	0.2	0.0

		* PRED	*WIND	*	COCN/LINK									
		* CONC	* BRG	*	(PPM)									
RECEPTOR		* (PPM)	*(DEG)	*	I	J	K	L	M	N	O	P		
-----*														
RECPT	1	*	1.7	* 193	*	0.0	0.0	0.1	0.0	0.0	0.2	0.0	0.0	
RECPT	2	*	1.8	* 284	*	0.1	0.4	0.0	0.0	0.0	0.0	0.1	0.2	
RECPT	3	*	1.7	* 12	*	0.0	0.4	0.0	0.0	0.0	0.0	0.2	0.0	
RECPT	4	*	1.6	* 148	*	0.0	0.3	0.0	0.0	0.0	0.0	0.2	0.0	

APPENDIX E

Noise Study

NOISE ANALYSIS
FOR THE
**ANAHEIM STADIUM AREA
MASTER LAND USE PLAN EIR**
CITY OF ANAHEIM

Report # 98-125
September 8, 1998

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NOISE ANALYSIS FOR THE ANAHEIM STADIUM MASTER LAND USE PLAN EIR

City of Anaheim

1.0 Introduction

The City of Anaheim is developing a Master Land Use Plan (MLAP) for the area which currently surrounds the stadium, recently named Edison International Field. The purpose of the plan is to provide guidelines for the future development of the region in order to provide a uniquely integrated business center. Existing land uses within this area include industrial, commercial, office, professional, and public recreation.

The noise sources within the project area include state highways, arterials, railroad and aircraft overflights. This noise analysis will predict the future noise levels that would exist with the implementation of the proposed project. The noise impacts of the project on land uses within the study area will be addressed and will specify whether the impacts can be considered significant. These projected noise levels will be compared with applicable City noise criteria and, if the assessment determines that impacts associated with the implementation of the project are to be significant, then the report will recommend mitigation that will reduce the project impacts to an insignificant level.

1.1 Noise Definition

Sound is technically described in terms of the loudness (amplitude) of the sound and frequency (pitch) of the sound. The standard unit of measurement of the loudness of sound is the Decibel (dB). Decibels are based on the logarithmic scale. The logarithmic scale compresses the wide range in sound pressure levels to a more usable range of numbers in a manner similar to the Richter scale used to measure earthquakes. In terms of human response to noise, a sound 10 dB higher than another is judged to be twice as loud; and 20 dB higher four times as loud; and so forth. Everyday sounds normally range from 30 dB (very quiet) to 100 dB (very loud).

Since the human ear is not equally sensitive to sound at all frequencies, a special frequency-dependent rating scale has been devised to relate noise to human sensitivity. The A-weighted decibel scale (dBA) performs this compensation by discriminating against frequencies in a manner approximating the sensitivity of the human ear. Community noise levels are measured in terms of the "A-weighted decibel," abbreviated dBA. Exhibit 1 provides examples of various noises and their typical A-weighted noise level.

SOUND LEVELS AND LOUDNESS OF ILLUSTRATIVE NOISES IN INDOOR AND OUTDOOR ENVIRONMENTS

<i>dB(A)</i>	<i>OVER-ALL LEVEL Sound Pressure Level Approx. 0.0002 Microbars</i>	<i>COMMUNITY (Outdoor)</i>	<i>HOME OR INDUSTRY</i>	<i>LOUDNESS Human Judgement of Different Sound Levels</i>
<i>130</i>	<i>UNCOMFORTABLY</i>	<i>Military Jet Aircraft Take-Off With After-Burner From Aircraft Carrier @ 50 Ft. (130)</i>	<i>Oxygen Torch (121)</i>	<i>120 dB(A) 32 Times as Loud</i>
<i>120</i> <i>110</i>	<i>LOUD</i>	<i>Turbo-Fan Aircraft @ Take Off Power @ 200 Ft. (99)</i>	<i>Riveting Machine (110) Rock-N-Roll Band (108-114)</i>	<i>110 dB(A) 16 Times as Loud</i>
<i>100</i>	<i>VERY</i>	<i>Jet Flyover @ 1000 Ft. (103) Boeing 707, DC-8 @ 6000 Ft. Before Landing (106) Bell J-2A Helicopter @ 100 Ft. (100)</i>		<i>100 dB(A) 8 Times as Loud</i>
<i>90</i>	<i>LOUD</i>	<i>Power Mower (96) Boeing 737, DC-9 @ 6000 Ft. Before Landing (97) Motorcycle @ 25 Ft. (90)</i>	<i>Newspaper Press (97)</i>	<i>90 dB(A) 4 Times as Loud</i>
<i>80</i>		<i>Car Wash @ 20 Ft. (89) Prop. Airplane Flyover @ 1000 Ft. (88) Diesel Truck, 40 MPH @ 50 Ft. (84) Diesel Train, 45 MPH @ 100 Ft. (83)</i>	<i>Food Blender (88) Milling Machine (85) Garbage Disposal (80)</i>	<i>80 dB(A) 2 Times as Loud</i>
<i>70</i>	<i>MODERATELY LOUD</i>	<i>High Urban Ambient Sound (80) Passenger Car, 65 MPH @ 25 Ft. (77) Freeway @ 50 Ft. From Pavement Edge, 10:00 AM (76 + or - 6)</i>	<i>Living Room Music (76) TV-Audio, Vacuum Cleaner</i>	<i>70 dB(A)</i>
<i>60</i>		<i>Air Conditioning Unit @ 100 Ft. (60)</i>	<i>Cash Register @ 10 Ft. (65-70) Electric Typewriter @ 10 Ft. (64) Dishwasher (Rinse) @ 10 Ft. (60) Conversation (60)</i>	<i>60 dB(A) 1/2 as Loud</i>
<i>50</i>	<i>QUIET</i>	<i>Large Transformers @ 100 Ft. (50)</i>		<i>50 dB(A) 1/4 as Loud</i>
<i>40</i>		<i>Bird Calls (44) Lower Levels Urban Ambient Sound (40)</i>		<i>40 dB(A) 1/8 as Loud</i>
	<i>JUST AUDIBLE</i>	<i>(dB(A) Scale Interrupted)</i>		
<i>10</i>	<i>THRESHOLD OF HEARING</i>			

SOURCE: Reproduced from Melville C. Branch and Robert B. Hurd, In the Metropolitan Environment, Published by the City of Los Angeles, 1970, p.2.



Exhibit 1 Typical A-Weighted Noise Levels

Sound levels decrease as a function of distance from the source as a result of wave divergence, atmospheric absorption and ground attenuation. As the sound wave form travels away from the source, the sound energy is dispersed over a greater area, thereby dispersing the sound power of the wave. Atmospheric absorption also influences the levels that are received by the observer. The greater the distance traveled, the greater the influence and the resultant fluctuations. The degree of absorption is a function of the frequency of the sound as well as the humidity and temperature of the air. Turbulence and gradients of wind, temperature and humidity also play a significant role in determining the degree of attenuation. In cases where receptors are located far away from potential adverse noise sources, intervening topography can have a substantial effect on the effective perceived noise levels. Many of the surrounding receptors have hills and/or ridges between the project sites and their home.

Noise has been defined as unwanted sound and it is known to have several adverse effects on people. From these known effects of noise, criteria have been established to help protect the public health and safety and prevent disruption of certain human activities. This criteria is based on such known impacts of noise on people as hearing loss, speech interference, sleep interference, physiological responses and annoyance. Each of these potential noise impacts on people are briefly discussed in the following narratives:

HEARING LOSS is not a concern in community noise situations of this type. The potential for noise induced hearing loss is more commonly associated with occupational noise exposures in heavy industry or very noisy work environments. Noise levels in neighborhoods, even in very noisy airport environs, is not sufficiently loud to cause hearing loss.

SPEECH INTERFERENCE is one of the primary concerns in environmental noise problems. Normal conversational speech is in the range of 60 to 65 dBA and any noise in this range or louder may interfere with speech. There are specific methods of describing speech interference as a function of distance between speaker and listener and voice level.

SLEEP INTERFERENCE is a major noise concern for traffic noise. Sleep disturbance studies have identified interior noise levels that have the potential to cause sleep disturbance. Note that sleep disturbance does not necessarily mean awakening from sleep, but can refer to altering the pattern and stages of sleep.

PHYSIOLOGICAL RESPONSES are those measurable effects of noise on people which are realized as changes in pulse rate, blood pressure, etc. While such effects can be induced and observed, the extent is not known to which these physiological responses cause harm or are sign of harm.

ANNOYANCE is the most difficult of all noise responses to describe. Annoyance is a very individual characteristic and can vary widely from person to person. What one person considers tolerable can be quite unbearable to another of equal hearing capability.

1.2 Noise Assessment Metrics

The description, analysis and reporting of community noise levels around communities is made difficult by the complexity of human response to noise and the myriad of noise metrics that have been developed for describing noise impacts. Each of these metrics attempt to quantify noise levels with respect to community response. Most of these metrics use the A-Weighted noise level to quantify noise impacts on humans. A-weighting is a frequency correction that correlates the overall sound pressure levels with the frequency response of the human ear.

Noise metrics can be divided into two categories: single event and cumulative. Single event metrics describe the noise levels from an individual event such as an aircraft flyover or perhaps a heavy equipment pass-by. Cumulative metrics average the total noise over a specific time period, which is typically 1 or 24-hours for community noise problems. For this type of project, cumulative noise metrics will be used.

1.3 Cumulative Noise Metrics

Several rating scales have been developed for measurement of community noise. These account for: (1) the parameters of noise that have been shown to contribute to the effects of noise on man, (2) the variety of noises found in the environment, (3) the variations in noise levels that occur as a person moves through the environment, and (4) the variations associated with the time of day. They are designed to account for the known health effects of noise on people described previously. Based on these effects, the observation has been made that the potential for a noise to impact people is dependent on the total acoustical energy content of the noise. A number of noise scales have been developed to account for this observation. Two of the predominate noise scales are the: Equivalent Noise Level (LEQ) and the Community Noise Equivalent Level (CNEL). These scales are described in the following paragraphs.

LEQ is the sound level corresponding to a steady-state sound level containing the same total energy as a time-varying signal over a given sample period. LEQ is the "energy" average noise level during the time period of the sample. LEQ can be measured for any time period, but is typically measured for one hour. This one-hour noise level can also be referred to as the Hourly Noise Level (HNL). It is the energy sum of all the events and background noise levels that occur during that time period.

CNEL, Community Noise Equivalent Level, is the predominant rating scale now in use in California for land use compatibility assessment. The CNEL scale represents a time weighted, 24-hour average noise level based on the A-weighted decibel. Time weighted refers to the fact that noise that occurs during certain sensitive time periods is penalized for occurring at these times. The evening time period (7 p.m. to 10 p.m.)

penalizes noises by 5 dBA, while nighttime (10 p.m. to 7 a.m.) noises are penalized by 10 dBA.

These time periods and penalties were selected to reflect people's increased sensitivity to noise during these time periods. A CNEL noise level may be reported as a "CNEL of 60 dBA," "60 dBA CNEL," or simply "60 CNEL." Typical noise levels in terms of the CNEL scale for different types of communities are presented in Exhibit 2.

L(N), or L%, is a statistical method of describing noise which accounts for variance in noise levels throughout a given measurement period. L(N), where N equals a percentage, is a way of expressing the noise level exceeded for a percentage of time in a given measurement period. For example, since 15 minutes is 25% of 60 minutes, L(25) is the noise level that is exceeded for fifteen minutes of a sixty minute measurement period. The L(N) metric is the most commonly used for noise ordinance standards.

For example most daytime city, state and county noise ordinances use an ordinance standard of 55 dBA for 30 minutes per hour or an L(50) level of 55 dBA. In other words, the noise ordinance states that for a residential land use, a piece of equipment not located on the property will not be allowed to generate a noise level of 55 dBA for more than thirty minutes in any hour. As the noise level limit increases, the time the noise is allowed to occur within any hour is reduced.

1.4 City of Anaheim Noise Criteria

The City of Anaheim has expressed standards specifically for controlling exterior noise exposure levels. The standard states that the maximum noise exposure level at a residential land use due to transportation related sources is 65 dB CNEL for exterior living areas and 45 dB CNEL for interior living areas. The City does not have specific exterior noise exposure standards for commercial, industrial, office, professional, and public recreation land uses. The City does use the Land Use Compatibility Criteria which are the guidelines set forth by the California Department of Health. Refer to Exhibit 3 for a listing of these guidelines.

The City of Anaheim has also established a Noise Ordinance within its Noise Element of the General Plan to address non-transportation related noise sources such as motors, fans, pumps and ventilation equipment. These standards set noise levels and limits on the duration any given noise is allowed to exist at various land uses. The louder the noise level, the shorter the period of time it is allowed to occur. The noise level allowed is dependent upon the type of land use being impacted by the noise.

The Noise Ordinance for the City of Anaheim is listed below. Included is a table which lists the specific noise ordinance values for each of the different land use types, the daytime and nighttime noise level limits, the amount of time the listed noise level is allowed to exist, and the corresponding L(N) value. To further clarify the ordinance values, each of the noise level limits and the maximum time allowed are listed for the Single Family Residential case.

CNEL

Outdoor Location

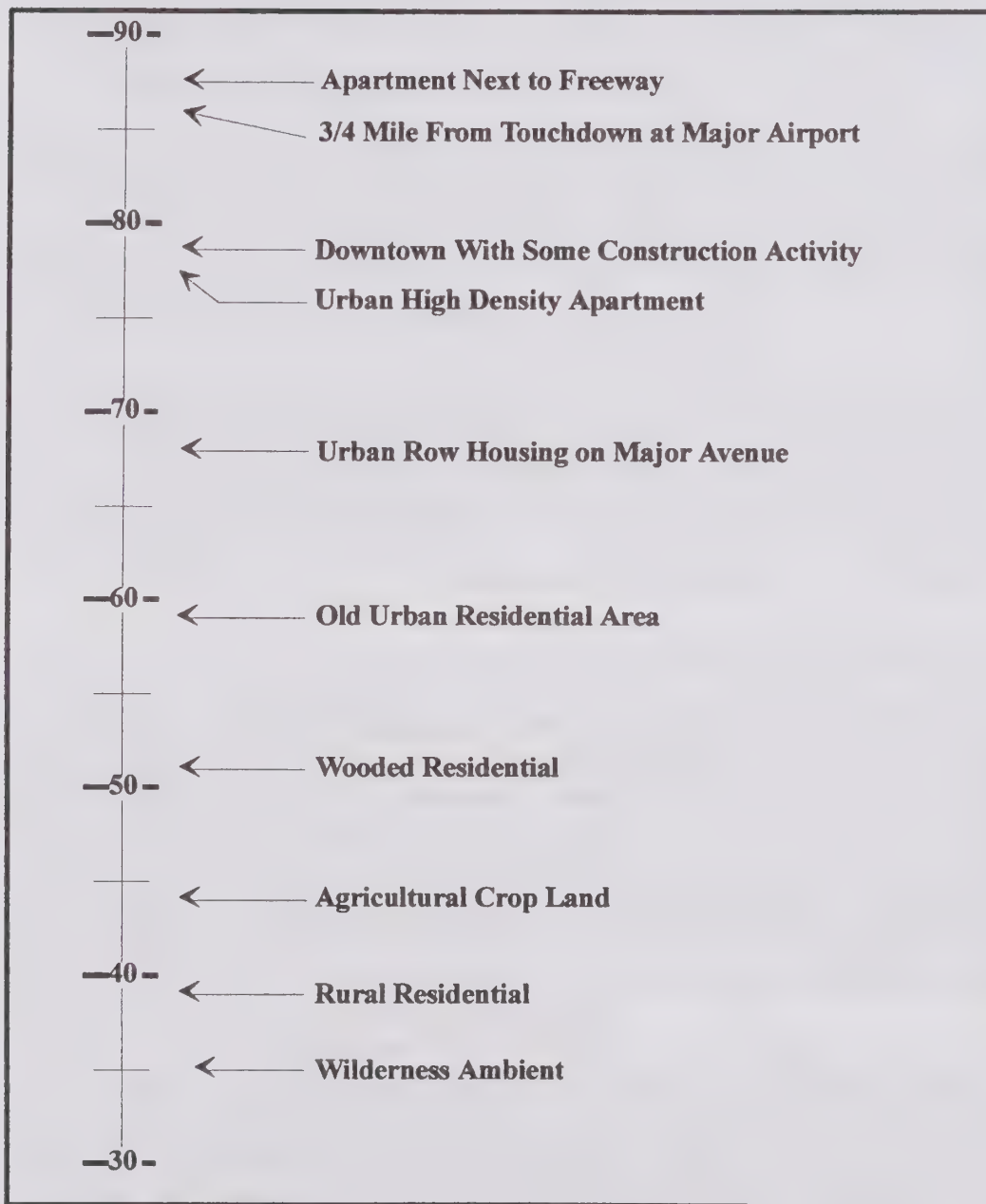


Exhibit 2
Typical CNEL Noise Levels

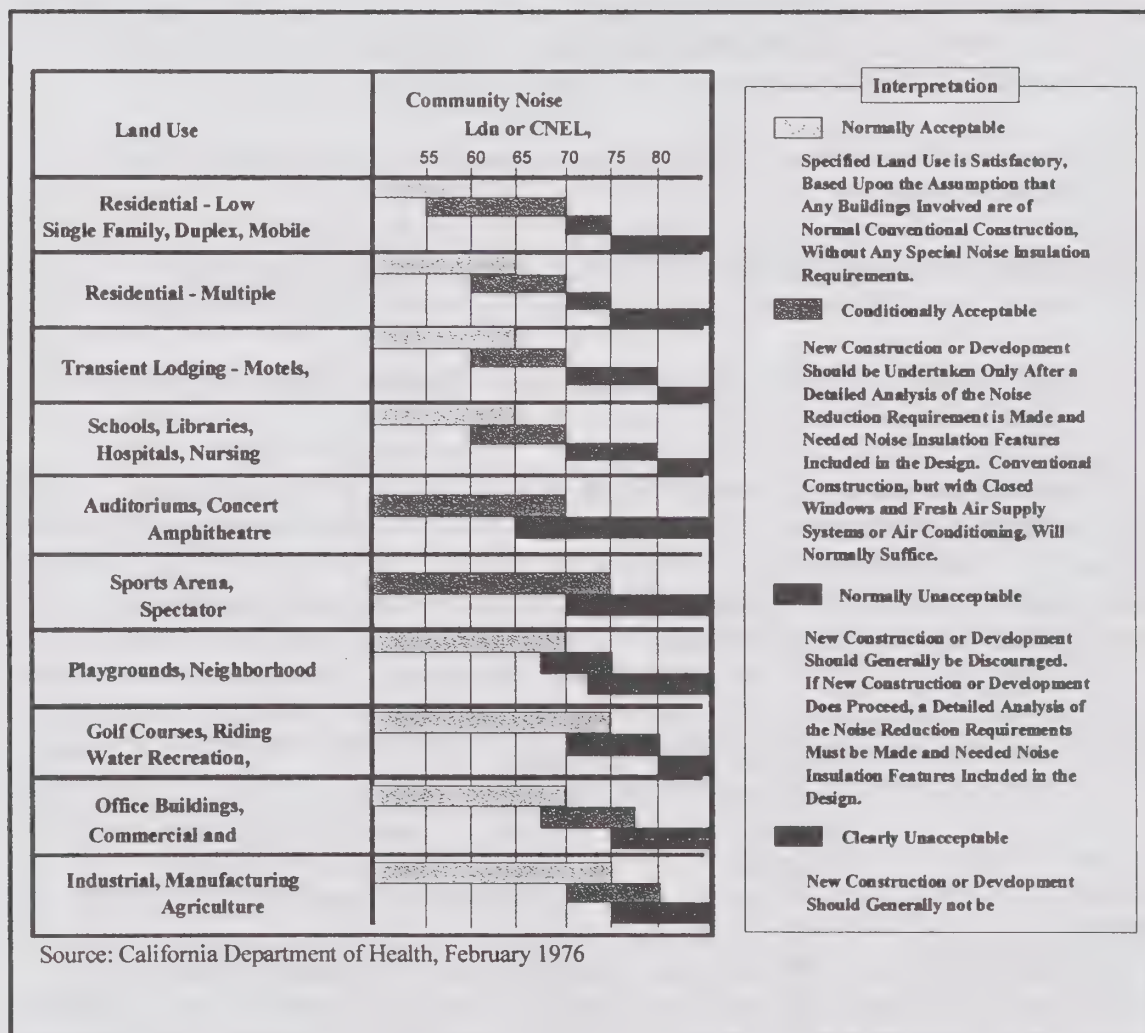


Exhibit 3 Land Use Compatibility Guidelines

The City of Anaheim Noise Ordinance states:

No person shall operate, or cause to be operated, any source of sound at any location within the City or allow the creation of any noise on property owned, leased, occupied, or otherwise controlled by such person, which causes the noise level when measured on any other property either incorporated or unincorporated to exceed:

- 1. The noise standard for that land use as specified below for a cumulative period of more that 30 minutes in any hour; or*
- 2. the noise standard plus 5 dB for a cumulative period of more that 15 minutes in any hour; or*
- 3. the noise standard plus 10 dB for a cumulative period of more that 5 minutes in any hour; or*
- 4. the noise standard plus 15 dB for a cumulative period of more that 1 minute in any hour; or*
- 5. the noise standard plus 20 dB or the maximum measured ambient, for any period of time.*

The specific noise levels for each land use type are listed below, along with the corresponding times and equivalent L% levels.

Land Use	Daytime Noise Levels (7:00 a.m. - 10:00 p.m.)	Nighttime Noise Levels (10:00 p.m. - 7:00 a.m.)	Maximum Duration (minutes)	Equivalent L(N)
Residential - One and Two Family	55	45	30	L ₅₀
	60	50	15	L ₂₅
	65	55	5	L _{8.3}
	70	60	1	L _{1.7}
	75	65	Never	---
Residential - Multiple Dwelling Public Space	55	50	30	L ₅₀
Commercial	60	55	30	L ₅₀
Industrial	70	70	30	L ₅₀

Source: City of Anaheim Noise Ordinance, 1978

2.0 Existing Noise Environment

The existing noise environment is dominated by the roadways that service the entire area. The project is bordered on the west by the Interstate 5 Freeway, and on the east by the Route 57 Freeway. The main arterial roadways which serve the project area include Katella Avenue, Orangewood Avenue, and State College Boulevard. The Stadium is also serviced by a major commuter rail line which runs through the center of the project site. The site is also subject to aircraft overflights due to events at the Stadium and traffic associated with local airports. During the summer time, the noise environment includes aerial fireworks displays from neighboring Disneyland.

3.0 Potential Noise Impacts

Two types of potential noise impacts may arise from the project: (1) construction noise may impact adjacent developed land uses, and (2) the project will increase traffic and will increase the noise environment at the adjacent areas.

3.1 Community Noise Assessment

In community noise assessment, changes in noise levels greater than 3 dB are often identified as significant, while changes less than 1 dB will not be discernible to local residents. In the range of 1 to 3 dB, residents who are very sensitive to noise may perceive a slight change. Note that there is no scientific evidence is available to support the use of 3 dB as the significance threshold. In laboratory testing situations, humans are able to detect noise level changes of slightly less than 1 dB. In a community noise situation, however, noise exposures are over a long time period, and changes in noise levels occur over years, rather than the immediate comparison made in a laboratory situation. Therefore, the level at which changes in community noise levels become discernible is likely to be some value greater than 1 dB, and 3 dB appears to be appropriate for most people.

3.2 Short Term Construction Noise Impacts

Construction noise is generally high level, short duration noise which represents a potential short term impact the ambient noise levels throughout the project site. Noise generated by construction equipment, including trucks, graders, bulldozers, concrete mixers and portable generators can reach high levels. Excavation and grading activities typically represent the highest potentials for noise impacts. The degree of impacts will be dictated by the amount of construction equipment used, the density of heavy equipment, the proximity to a noise sensitive land use area, and the duration of the grading process. General grading and construction activity noise levels for various pieces of equipment are shown in Exhibit 4. The noise levels listed in this exhibit represent the range of noises generated at a distance of 50 feet from the equipment. Noise levels emanating from a single source typically fall off at a rate of 6 dB for every doubling of distance from the source.

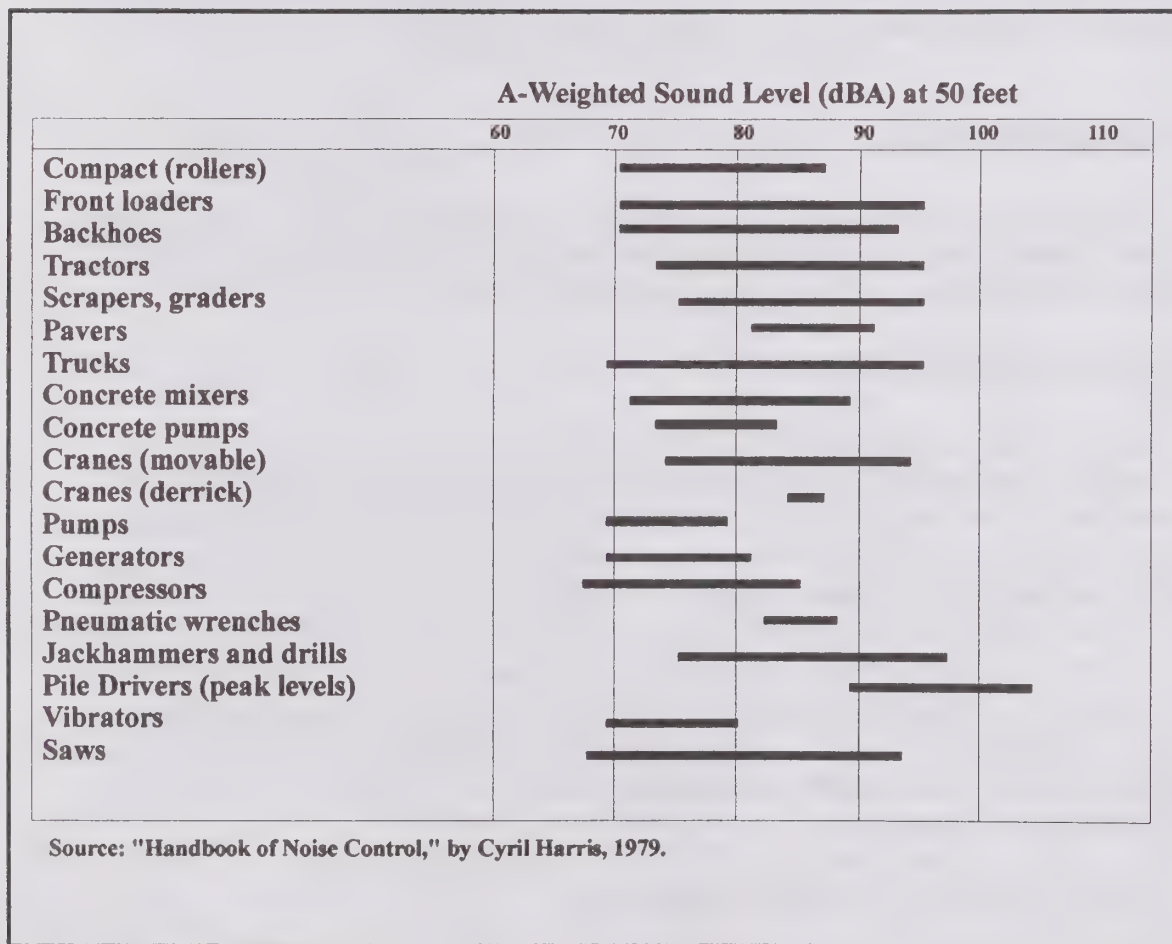


Exhibit 4
Typical Construction Noise Levels at 50 Feet

At a distance of 200 feet, the noise levels shown in Exhibit 4 are approximately 12 dBA less; at a distance of 1,000 feet, the levels are about 25 dBA less. The loudest piece of equipment that is expected to operate would be equipment used during the grading process (tractors and scrapers).

The 550 acre project area currently consists of industrial, commercial, business office and recreational land uses, which are generally not considered to be noise sensitive. The nearest existing noise sensitive land use to the project site are located northeast of the project site on the west side of the Route 57 Freeway. Most of this section of the project area is already developed with commercial and industrial uses, so it is not expected that there will be a significant amount of new development and construction noise in the region.

As previously stated, construction noise represents a short-term impact on ambient noise levels. Every effort must be made to ensure that during construction excessive noise is minimized whenever possible. Noise generated by construction equipment and construction activities can reach high levels. Construction equipment noise comes under the control of the Environmental Protection Agency's Noise Control Program (Part 204 of Title 40, Code of Federal Regulations). Some on-site impacts will occur when developing lands adjacent to existing commercial and industrial business.

The most effective method to control construction noise is through the institution of local control over construction hours. Construction activities should not occur outside of the hours of 7 a.m. through 7 p.m., Monday through Friday, and 8 a.m. through 6 p.m. on Saturdays. No construction should occur on Sundays or Federal holidays.

3.3 Railroad Noise Levels

The "Assessment of Noise Environments Around Railroad Operations," (Wyle Laboratories Report WCR 73-5, July 1973) was used to model the train noise levels on the project site. The noise generated by a train pass-by can be divided into two components; the noise generated by the engine or locomotive, and the noise due to the railroad cars. The characteristic frequency of the engine is different than for the cars. The effective radiating frequency is 1,000 Hz for the locomotive engines, and 2,000 Hz for the portion of the noise generated by the cars. The noise generated by the engine is the result of the mechanical movements of the engine parts, the combustion process, the horn if used, and to a lesser extent the exhaust system. The noise generated by the cars is a result of the interaction between the wheels and the railroad track. A source height equal to 0 feet is used for the car noise, and a source height of 10 feet is utilized for the locomotive.

A major commuter rail corridor that connects Anaheim with both Los Angeles and San Diego Counties runs through the middle of the project site and may be the source of significant levels of noise. This line is owned and operated by the Southern California Railroad Authority (SCRRA). This line currently accommodates Amtrak passenger trains running from Los Angeles to San Diego, Metrolink commuter trains running from

Los Angeles to Carlsbad, and local freight trains. According to Ms. Joanna Kappell of LosSan, the line currently operates 11 Metrolink trains per day, and by the end of 2001, they expect to be operating 21 daily trains. There are currently 20 Amtrak trains which use the line each day. This line is also used for through and local freight operations which are scheduled around the current passenger and commuter trains. This line normally accommodates a freight traffic volume of few through trains per week, and a local freight running at least twice a day. These local freights are generally less than ten cars in length while the through freights can be up to 6,000 feet in length. These trains can be operated anytime of the day or night depending upon customer demand.

This operational data was utilized in conjunction with the Wyle Model to project train noise on the project site. The results are presented below in Table 5 as distances from the railroad centerline to the contour values indicated. The projections do not include topography or barriers which may reduce the noise levels.

Table 5
Projected Railroad Noise Levels

Source	Distance to CNEL Contours (ft.)		
	70 dB	65 dB	60 dB
Passenger and Freight Operations	182	351	678

The railroad line runs through the middle of the project site along the north side of the Stadium. All of the land uses located adjacent to the rail line within the project site are commercial and industrial types of uses. Since the proposed project does not expect to change the number of railroad related operations on this line, and since the land uses located next to the rail line are not considered to be noise sensitive, there are no projected noise impacts on the project due to railroad operations.

3.4 Long Term Traffic Noise Impacts

The projected traffic noise levels were established in the CNEL index by computer modeling the roadways in the project vicinity for future traffic and speed characteristics. The noise level projections were computed using the Highway Noise Model published by the Federal Highway Administration ("FHWA Highway Traffic Noise Prediction Model," FHWA-RD-77-108, December 1978). The FHWA Model uses traffic volume, vehicle mix, vehicle speed, and roadway geometry to compute the noise exposure levels. The traffic volumes used in this analysis were taken from the "Draft Anaheim Stadium Area Master Land Use Plan Traffic Study" prepared by Austin-Foust Associates, Inc., and dated August 19, 1998.

The impact of the Master Land Use Plan implementation on the land uses along the roadways within the project site are assessed by comparing the projected noise levels with the completed project in place, with the noise levels that would exist in the future without the project. The difference in noise levels for each of these roadways would be due to the increase in traffic caused by the project alone.

Table 6 contains the projected traffic volumes for the roadways in the project area. This table includes the future traffic volumes for both the No Project and With Project cases. Using these traffic volumes, the projected noise levels were computed for both cases. The time and traffic distributions used for calculating vehicle noise exposure levels are presented in Table 7. These data are based on traffic counts at 31 intersections throughout the Southern California area.

The results of the noise exposure calculations are listed in terms of distances to the 60 dB, 65 dB, and 70 dB CNEL contours. Table 8 lists the distances to the noise contours for the Future No Project case, and Table 9 lists the distances to the noise contours for the Future With Project case. These values are the distances from the centerline of the road to the contour value shown. Note that the values given in Tables 8 & 9 do not take into account the effect of the topography, existing noise barriers, or intervening buildings that may alter the roadway noise levels.

Table 6

Projected Average Daily Traffic (ADT) Volumes

Roadway	Future No Project	Future With Project
Cerritos Ave.		
Lewis St. to State College Blvd.	11,000	13,000
Katella Ave.		
I-5 Fwy to Lewis St.	43,000	45,000
Lewis St. to State College Blvd.	32,000	36,000
State College Blvd. to SR-57	46,000	49,000
SR-57 to Main St.	48,000	51,000
Gene Autry Way		
I-5 Fwy to State College Blvd.	25,000	26,000
Orangewood Ave.		
I-5 Fwy to State College Blvd.	40,000	41,000
State College Blvd. to SR-57	39,000	38,000
SR-57 to Main St.	28,000	27,000
Lewis St.		
Cerritos Ave. to Katella Ave.	14,000	13,000
Katella Ave. to I-5 Fwy	10,000	8,000
State College Boulevard		
Ball Rd. to Cerritos Ave.	31,000	33,000
Cerritos Ave. to Katella Ave.	32,000	35,000
Katella Ave. to Gene Autry Way	42,000	45,000
Gene Autry Way to Orangewood Ave.	40,000	41,000
Orangewood Ave. to Chapman Ave.	34,000	32,000
Chapman Ave. to Lampson St.	40,000	39,000

Table 7

Traffic Distribution per Time of Day in Percent of ADT

Vehicle Type	Day	Evening	Night
Automobile	75.71%	12.35%	9.36%
Medium Truck	1.43%	0.23%	0.18%
Heavy Truck	0.58%	0.09%	0.07%

Table 8

Distance to Future - No Project Noise Contours

Roadway Section	ADT	Distance to CNEL Contours (ft.)		
		70 dB	65 dB	60 dB
Cerritos Ave.				
Lewis St. to State College Blvd.	11,000	< 50	56	120
Katella Ave.				
I-5 Fwy to Lewis St.	43,000	78	168	362
Lewis St. to State College Blvd.	32,000	64	138	297
State College Blvd. to SR-57	46,000	82	176	379
SR-57 to Main St.	48,000	84	181	390
Gene Autry Way				
I-5 Fwy to State College Blvd.	25,000	< 50	96	207
Orangewood Ave.				
I-5 Fwy to State College Blvd.	40,000	61	131	283
State College Blvd. to SR-57	39,000	73	157	339
SR-57 to Main St.	28,000	< 50	104	223
Lewis St.				
Cerritos Ave. to Katella Ave.	14,000	< 50	65	141
Katella Ave. to I-5 Fwy	10,000	< 50	52	112
State College Boulevard				
Ball Rd. to Cerritos Ave.	31,000	63	135	291
Cerritos Ave. to Katella Ave.	32,000	64	138	297
Katella Ave. to Gene Autry Way	42,000	77	165	356
Gene Autry Way to Orangewood Ave.	40,000	74	160	345
Orangewood Ave. to Chapman Ave.	34,000	67	144	310
Chapman Ave. to Lampson St.	40,000	74	160	345

< 50" Noise contours are within 50' of the roadway centerline.

Table 9
Distance to Future - With Project Noise Contours

Roadway Section	ADT	Distance to CNEL Contours (ft.)		
		70 dB	65 dB	60 dB
Cerritos Ave.				
Lewis St. to State College Blvd.	13,000	< 50	62	134
Katella Ave.				
I-5 Fwy to Lewis St.	45,000	80	173	373
Lewis St. to State College Blvd.	36,000	69	149	322
State College Blvd. to SR-57	49,000	85	183	395
SR-57 to Main St.	51,000	87	188	406
Gene Autry Way				
I-5 Fwy to State College Blvd.	26,000	< 50	99	213
Orangewood Ave.				
I-5 Fwy to State College Blvd.	41,000	62	134	288
State College Blvd. to SR-57	38,000	72	155	333
SR-57 to Main St.	27,000	< 50	101	218
Lewis St.				
Cerritos Ave. to Katella Ave.	13,000	< 50	62	134
Katella Ave. to I-5 Fwy	8,000	< 50	< 50	97
State College Boulevard				
Ball Rd. to Cerritos Ave.	33,000	65	141	303
Cerritos Ave. to Katella Ave.	35,000	68	146	316
Katella Ave. to Gene Autry Way	45,000	80	173	373
Gene Autry Way to Orangewood Ave.	41,000	76	163	351
Orangewood Ave. to Chapman Ave.	32,000	64	138	297
Chapman Ave. to Lampson St.	39,000	73	157	339

"< 50" Noise contours are within 50' of the roadway centerline.

To determine the change in noise level due to the project, a comparison is made between the future with and without project noise levels. Table 10 lists the projected traffic noise levels at a distance of fifty (50) feet from the centerline of the roadways for both the No Project and With Project cases. The last column in the table shows the increased noise level due to the project alone, which is the difference between the Future With Project and Future Without Project noise levels. On most of the roadway segments there is an increase in noise level due to the project, and on some roadway segments, there will be a reduction of noise.

Table 10

Noise Level 50 Feet from Roadway Centerline
& Increase in Noise Levels due to Project

Roadway Section	Future No Project (CNEL)	Future With Project (CNEL)	Increase due to Project
Cerritos Ave.			
Lewis St. to State College Blvd.	65.7	66.5	0.7
Katella Ave.			
I-5 Fwy to Lewis St.	72.9	73.1	0.2
Lewis St. to State College Blvd.	71.6	72.2	0.5
State College Blvd. to SR-57	73.2	73.5	0.3
SR-57 to Main St.	73.4	73.7	0.3
Gene Autry Way			
I-5 Fwy to State College Blvd.	69.3	69.5	0.2
Orangewood Ave.			
I-5 Fwy to State College Blvd.	71.3	71.4	0.1
State College Blvd. to SR-57	72.5	72.4	-0.1
SR-57 to Main St.	69.8	69.6	-0.2
Lewis St.			
Cerritos Ave. to Katella Ave.	66.8	66.5	-0.3
Katella Ave. to I-5 Fwy	65.3	64.3	-1.0
State College Boulevard			
Ball Rd. to Cerritos Ave.	71.5	71.8	0.3
Cerritos Ave. to Katella Ave.	71.6	72.0	0.4
Katella Ave. to Gene Autry Way	72.8	73.1	0.3
Gene Autry Way to Orangewood Ave.	72.6	72.7	0.1
Orangewood Ave. to Chapman Ave.	71.9	71.6	-0.3
Chapman Ave. to Lampson St.	72.6	72.5	-0.1

The greatest increase in noise due to the project will be found along Cerritos Ave. between Lewis St. and State College Blvd. (0.7 dB). The next largest increases will be found along Katella Ave. between Lewis St. and State College Blvd., along State College Blvd. between Cerritos Ave. and Katella Ave., along Katella from State College Blvd. to Main St., along State College Blvd. between Ball Rd. and Cerritos Ave. and between Katella Ave. to Gene Autry Way. The list of the roadway segments expected to experience the greatest increase in traffic noise is shown in Table 11. All of the projected increases in the traffic noise levels are less than 1 dB, therefore the projected impact due to these increases is expected to be insignificant.

Table 11**Largest Projected Noise Increases**

Roadway	Section	Increase (dB)
Cerritos Ave.	Lewis St. to State College Blvd.	0.7
Katella Ave.	Lewis St. to State College Blvd.	0.5
State College Blvd.	Cerritos Ave. to Katella Ave.	0.4
Katella Ave.	State College Blvd. to SR-57	0.3
	SR-57 to Main St.	0.3
State College Blvd.	Ball Rd. to Cerritos Ave.	0.3
	Katella Ave. to Gene Autry Way	0.3

Some of the roadways in the project are expected to see a decrease in the level of traffic noise due to the project. This is probably due to a rerouting of traffic to widened, more improved arterials. The greatest decrease in noise due to the project will be found along Lewis St. between Katella Ave. and the I-5 Fwy. (-1.0 dB). The next largest decreases will be found along Lewis St. from Cerritos Ave. to Katella Ave., along State College Blvd. between Orangewood Ave. and Chapman Ave., on Orangewood Ave. between SR-57 and Main St., along Orangewood Ave from State College Blvd. to SR-57, and along State College Blvd. between Chapman Ave. and Lampson St. The list of the roadway segments expected to experience the greatest decrease in traffic noise is shown in Table 12.

Table 12**Largest Projected Noise Decreases**

Roadway	Section	Decrease (dB)
Lewis St.	Katella Ave. to I-5 Fwy	-1.0
Lewis St.	Cerritos Ave. to Katella Ave.	-0.3
State College Blvd.	Orangewood Ave. to Chapman Ave.	-0.3
Orangewood Ave.	SR-57 to Main St.	-0.2
Orangewood Ave.	State College Blvd. to SR-57	-0.1
State College Blvd.	Chapman Ave. to Lampson St.	-0.1

The proposed project will bring an increase in traffic noise to some sections of some of the roadways within the project area. The greatest increases in long term traffic noise are expected to be along Katella Ave. and State College Blvd. The largest single increase in traffic related noise due to the project is expected along Cerritos Ave. between Lewis St. and State College Ave. and it is a projected increase of 0.7 dB. All of the other increases due to the project are 0.5 dB or less. Given that the magnitude of the projected increases in noise are all less than 1 dB, and that all of the increases are in land uses not sensitive to noise, the long term impact on the existing land uses within the project due to roadway noise is considered to be insignificant.

4.0 Mitigation Measures

The only significant impact due to the project will be the short term impact of construction noise on the adjacent land uses. Subsequently mitigation measures should be taken to reduce these potential impacts.

- Construction activities should be limited to the hours of 7 a.m. to 7 p.m. during the week, 8 a.m. to 6 p.m. on Saturdays, and never on Sundays or legal holidays.
- Limit hours of operation of equipment which produces significant impact noise or levels noticeably above general construction noise to the hours of 10 a.m. to 4 p.m.
- If heavy construction activities occur adjacent to noise sensitive land uses, then temporary noise barriers should be installed to protect those land uses during the periods of loudest construction events.
- All internal combustion engines on all of the construction equipment should be properly outfitted with well maintained muffler systems.

APPENDIX F

Cultural Resources Response Letter

South Central Coastal Information Center
California Historical Resources Information System
UCLA Institute of Archaeology
A163 Fowler Building
Los Angeles, California 90095-1510
(310) 825-1980 / FAX (310) 206-4723 / sccic@ucla.edu

Los Angeles
Orange
Ventura

November 24, 1997

Steven H. Smith
Michael Brandman Associates
15901 Red Hill Avenue, Suite 200
Tustin, CA 92780-7318

RE: Records search request for the proposed Anaheim Stadium Planning Area Master Project, Anaheim and Orange Quadrangle, Orange County, California.

Dear Mr. Smith:

As per your request received November 11, 1997, we have conducted a records search for the above referenced project. This search included a review of all recorded historic and prehistoric archaeological sites within the project area, as well as a review of all known cultural resource survey and excavation reports. In addition, we have checked our file of historic maps, the California State Historic Resources Inventory, the National Register of Historic Places, the listing of California Historical Landmarks, and the California Points of Historical Interest. The following is a discussion of our findings for the project area.

Due to the sensitive nature of cultural resources, archaeological site locations are not released.

PREHISTORIC RESOURCES:

No prehistoric archaeological sites have been identified within a one mile radius of the project area.

HISTORIC RESOURCES:

No historic archaeological sites have been identified within a one mile radius of the project area

Inspection of our historic maps – Anaheim (1896 & 1942) 15' series – indicated that the city of Anaheim was moderately developed with a light street grid pattern. The project area is surrounded by the Southern Pacific Railroad and the Atchison Topeka and Santa Fe Railroad. The Santa Ana River bounded the project area on the east. There were no significant changes up until 1942.

The California State Historic Resources Inventory lists no properties within a one mile radius of the project area.

The National Register of Historic Places lists no properties within a one mile radius of the project area.

The California Historical Landmarks (1990) of the Office of Historic Preservation, California Department of Parks and Recreation, lists no Landmarks within a one mile radius of the project area.

The California Points of Historical Interest (1992), of the Office of Historic Preservation California Department of Parks and Recreation, lists no properties within a one mile radius of the project area.

PREVIOUS ARCHAEOLOGICAL INVESTIGATIONS:

Eleven surveys and/or excavations have been conducted within a one mile radius of the project area. Six of these are partially located within the project area. One additional investigation have been conducted on the Anaheim and Orange quadrangles, but lack cannot be mapped due to insufficient locational information.

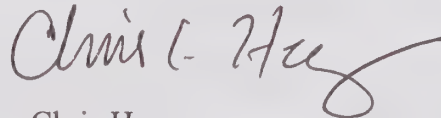
RECOMMENDATIONS

Cultural Resources are likely to be in the vicinity of the Santa Ana River; thus, a Phase I archaeological survey should be completed prior to modifying the project area.

If you have any questions regarding our results or the recommendations presented herein, please feel free to contact our office at (310) 825-1980.

Invoices are mailed approximately two weeks after records searches are completed. This enables your firm to request further information under the same invoice number. Please reference the invoice number listed below when making inquiries. Requests made after invoicing will involve the preparation of a separate invoice with a \$15.00 handling fee.

Sincerely,



Chris Heng
Historical Resources Specialist

Enclosures:

- () SIS list
- () Invoice # 7025

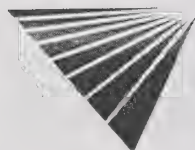
APPENDIX G

Hazardous Site Database Report

SITE ASSESSMENT PLUS REPORT (EXTENDED BY 1 MILE)

PROPERTY INFORMATION	CLIENT INFORMATION
Project Name/Ref #: STADIUM STADIUM PLANNING AREA KATELLA AVE STATE COLLEGE BLVD ANAHEIM, CA 92805 Latitude/Longitude: (33.803590, 117.888255)	STEVEN SMITH MICHAEL BRANDMAN ASSOC-TUSTI 15901 REDHILL AVENUE TUSTIN, CA 92780

Site Distribution Summary			within 1 1/8 miles	1 1/8 to 1 1/4 miles	1 1/4 to 1 1/2 miles	1 1/2 to 2 miles
Agency / Database - Type of Records						
A) Databases searched to 2 miles:						
US EPA	NPL	National Priority List	0	0	0	0
US EPA	CORRACTS (TSD)	RCRA Corrective Actions and associated TSD	0	0	0	1
STATE	SPL	State equivalent priority list	0	0	0	0
STATE	SCL	State equivalent CERCLIS list	5	0	0	7
B) Databases searched to 1 1/2 miles:						
US EPA	CERCLIS / NFRAP	Sites currently or formerly under review by US EPA	6	0	1	-
US EPA	TSD	RCRA permitted treatment, storage, disposal facilities	0	0	0	-
STATE REG CO	LUST	Leaking Underground Storage Tanks	54	12	12	-
STATE/REG/CO	SWLF	Permitted as solid waste landfills, incinerators, or transfer stations	3	1	1	-
STATE	DEED RSTR	Sites with deed restrictions	0	0	0	-
STATE	CORTESE	State index of properties with hazardous waste	18	4	2	-
STATE	TOXIC PITS	Toxic Pits cleanup facilities	0	0	0	-
C) Databases searched to 1 1/4 miles:						
US EPA	RCRA Viol	RCRA violations/enforcement actions	2	0	-	-
US EPA	TRIS	Toxic Release Inventory database	3	2	-	-
STATE	UST/AST	Registered underground or aboveground storage tanks	73	12	-	-
COUNTY	UNIQUE CO	Unique county databases	28	3	-	-



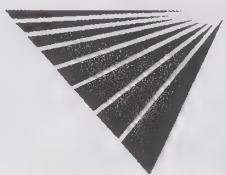
For more information call VISTA Information Solutions, Inc. at 1 - 800 - 767 - 0403.

Report ID: 149646-001

Date of Report: November 12, 1997

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SITE ASSESSMENT PLUS REPORT (EXTENDED BY 1 MILE)

Map of Sites within Two Miles



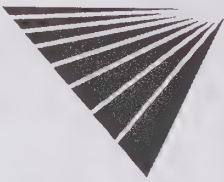
Subject Site	Category:	A	B	C	D
	Databases Searched to:	2 mi.	1 1/2 mi.	1 1/4 mi.	1 1/8 mi.
★	Single Sites	◆	■	▲	○
	Multiple Sites	◆	■	▲	○
	Highways and Major Roads	NPL, SPL, CORRACTS (TSD), SCL	CERCLIS, NFRAP, TSD, LUST, SWLF	RCRA VIOL, TRIS, UST	ERNS, GENERATORS
	Roads				
	Railroads				
	Rivers or Water Bodies				
	Utilities				

For More Information Call VISTA Information Solutions, Inc. at 1 - 800 - 767 - 0403

Report ID: 149646001

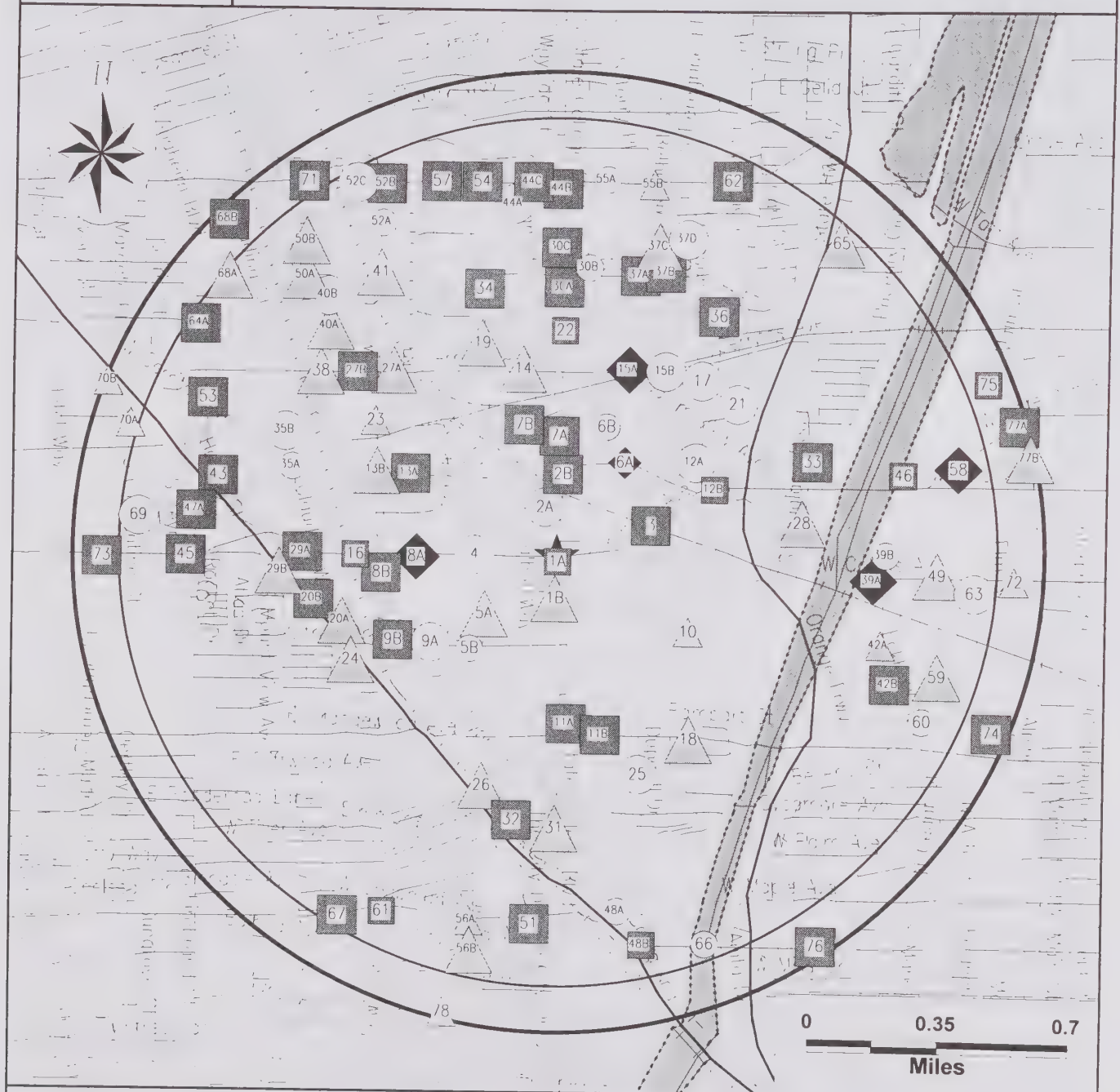
Date of Report: November 12, 1997

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SITE ASSESSMENT PLUS REPORT (EXTENDED BY 1 MILE)

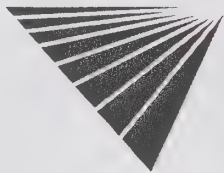
Map of Sites within One and One-Quarter Miles



Subject Site	Category:	A	B	C	D
	Databases Searched to:	2 mi.	1 1/2 mi.	1 1/4 mi.	1 1/8 mi.
★	Single Sites	◆	■	■	■
	Multiple Sites	◆◆	■■	■	■
—	Highways and Major Roads	NPL, SPL, CORRACTS (TSD), SCL	CERCLIS, NFRAP, TSD, LUST, SWLF	RCRA VIOL, TRIS, UST	ERNS, GENERATORS
—	Roads				
—	Railroads				
—	Rivers or Water Bodies				
•	Utilities				

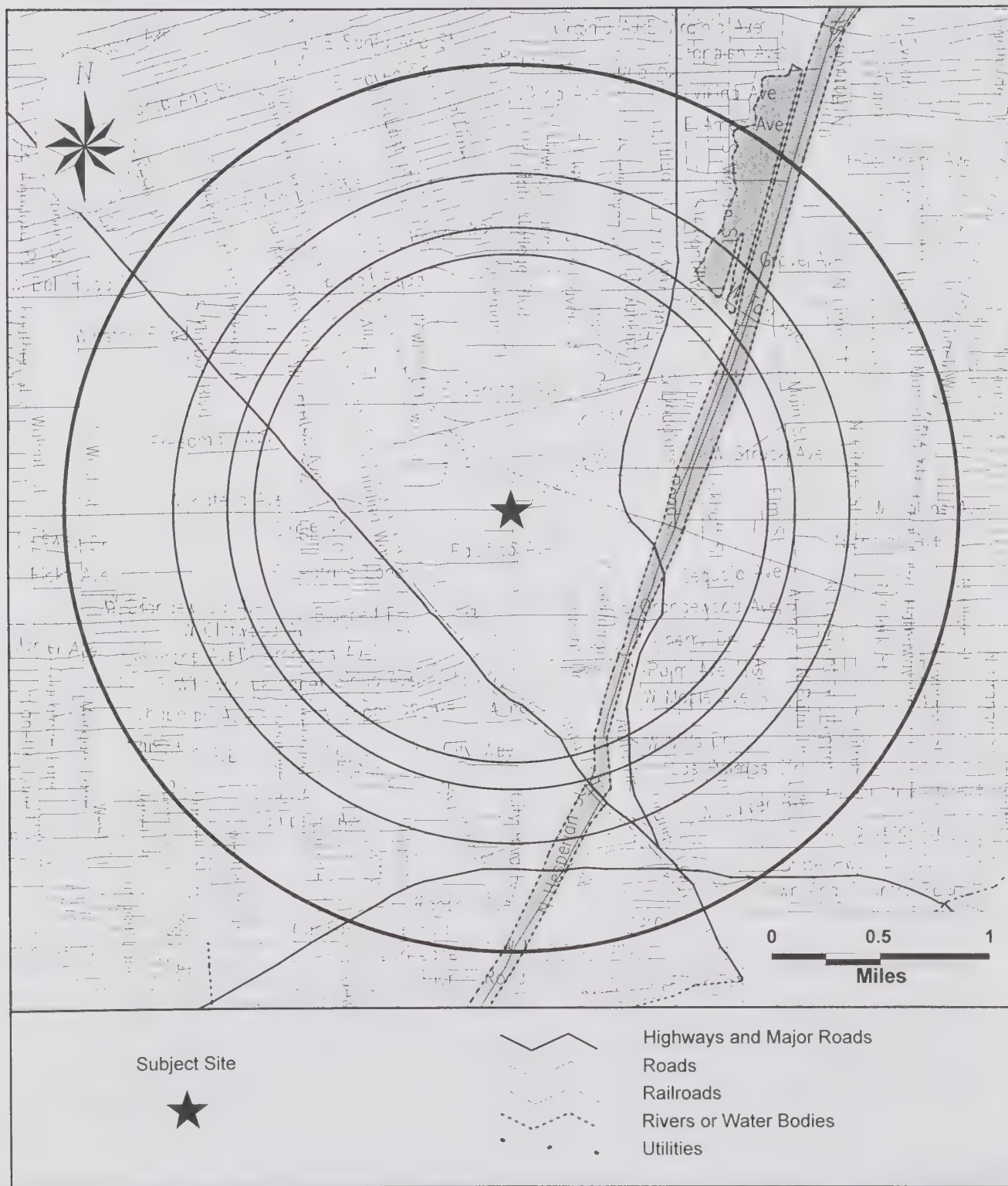
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Report ID: 149646001

Date of Report: November 12, 1997



SITE ASSESSMENT PLUS REPORT (EXTENDED BY 1 MILE)

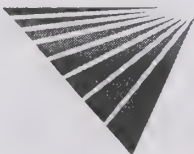
Street Map



SITE ASSESSMENT PLUS REPORT (EXTENDED BY 1 MILE)

SITE INVENTORY

MAP ID	PROPERTY AND THE ADJACENT AREA (within 1 1/8 miles)	VISTA ID DISTANCE DIRECTION	A				B						C				D	
			NPL	CORRACTS(TSD)	SPL	SCL	CERCLIS/NFRAP	TSD	LUST	SWLF	DEED RSTR	CORTESE	TOXIC PITS	RCRA VIOL	TRIS	UST/AST	UNIQUE CO	ERNS
1A	ARCO FACILITY #6220 1801 S STATE COLLEGE ANAHEIM, CA 92806	4043697 0.00 MI NA						X							X			
1B	CALIFORNIA CUSTOM SHAPES INC 1800 TALBOT WY ANAHEIM, CA 92805	4063345 0.04 MI S																X
1B	SOUTHERN CALIF GAS CO 1919 S STATE COLLEGE ANAHEIM, CA 92806	1281833 0.09 MI S													X			
2A	SDC COATINGS INC 1911 WRIGHT CIR ANAHEIM, CA 92806	1608538 0.07 MI N																X
2A	ARIUM CORPORATION 1931 WRIGHT CIRCLE ANAHEIM, CA 92806	26193 0.08 MI N																X
2B	CERTRON CORPORATION 1701 STATE COLLEGE BLVD SOUTH ANAHEIM, CA 92806	5358874 0.15 MI N						X										
2B	CERTRON CORP 1701 S STATE COLLEGE BLVD ANAHEIM, CA 92806	76230 0.15 MI N						X										X
2B	TEXACO SERVICE STATION /GEORGE 1650 STATE COLLEGE BLVD SOUTH ANAHEIM, CA 92806	1186337 0.17 MI N						X										
2B	HESS PHOTOGRAPHIC 2020 E HOWELL KNIT C ANAHEIM, CA 92806	193661 0.18 MI N																X
3	STADIUM MOTORS INC 2225 E KATELLA ANAHEIM, CA 92806	395810 0.16 MI E						X			X				X			X
3	SHELL (0222-2705) 2331 E KATELLA ANAHEIM, CA 92806	1151427 0.26 MI E													X			
4	ORANGE COUNTY MICROFILM INC 1456 E KATELLA ANAHEIM, CA 92805	1601019 0.16 MI W																X



X = search criteria; • = tag-along (beyond search criteria).

For more information call VISTA Information Solutions, Inc. at 1 - 800 - 767 - 0403.

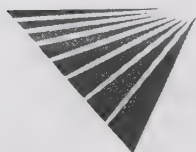
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MAP ID	PROPERTY AND THE ADJACENT AREA (within 1 1/8 miles)	VISTA ID DISTANCE DIRECTION	A			B						C			D				
			NPL	CORRACTS(TSD)	SPL	SCL	CERCLIS/INFRAP	TSD	LUST	SWLF	DEED RSTR	CORTESE	TOXIC PITS	RCRA VIOL	TRIS	UST/AST	UNIQUE CO	ERNS	GNRTR
4	KRAFT GENERAL FOODS 1515 E KATELLA AVE ANAHEIM, CA 92805	5713498 0.17 MI W																	X
5A	VETERINARY REFERENCE LABORATORY 1871 CHRIS LN ANAHEIM, CA 92805	453150 0.19 MI SW																	X
5A	ROCKY MOUNTAIN WATER INC 1880 S CHRIS ANAHEIM, CA 92805	358633 0.20 MI SW													X				X
5B	LIFE STYLES FOR THE RICH, INC 1520 PACIFICO TUSTIN, CA 92680	243921 0.29 MI SW																	X
6A	ITASCO 2211 E HOWELL ST ANAHEIM, CA 92804	212769 0.25 MI NE				X	X		X										
6B	NORTHROP CORPORATION 1541 PAGE CT ANAHEIM, CA 92806	301148 0.31 MI NE																	X
7A	DEL PISO BRICK COMPANY 1635 STATE COLLEGE BLVD, SOUTH ANAHEIM, CA 92806	6478955 0.26 MI N							X										
7A	DEL PISO BRICK TILE 1635 S STATE COLLEGE ANAHEIM, CA 92806	1176027 0.26 MI N							X						X				
7A	ROLLINS LEASING CORP.BR.# 146- 1635 S. STATE COLLEGE BLVD. ANAHEIM, CA 92806	6613738 0.26 MI N													X				
7B	NORCO DELIVERY SERVICE INC. 1500 BABBITT ST ANAHEIM, CA 92805	5352564 0.30 MI N									X								
7B	NORCO DELIVERY SERVICE INC 1500 E BABBITT ANAHEIM, CA 92805	298606 0.30 MI N							X						X				X
7B	DAVIDSON PANEL CO 1551 E BABBITT AVE ANAHEIM, CA 92805	114759 0.31 MI N																	X
7B	CONTINENTAL CHEM CO 1651 BABBITT AVE ANAHEIM, CA 92805	100260 0.31 MI N																	X
7B	CONTINENTAL CHEMICAL 1651 EAST BABBITT AVE ANAHEIM, CA	200052758 0.31 MI N															X		
8A	GESTETNER CORP 1290 E KATELLA AVE ANAHEIM, CA 92805	170386 0.27 MI W																	X



X = search criteria; • = tag-along (beyond search criteria).

For more information call VISTA Information Solutions, Inc. at 1 - 800 - 767 - 0403.

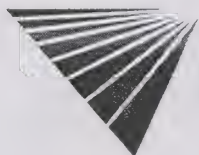
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MAP ID	PROPERTY AND THE ADJACENT AREA (within 1 1/8 miles)	VISTA ID DISTANCE DIRECTION	A			B						C				D			
			NPL	CORRACTS(TSD)	SPL	SCL	CERCLIS/NFRAP	TSD	LUST	SWLF	DEED RSTR	CORTESE	TOXIC PITS	RCRA VIOL	TRIS	UST/AST	UNIQUE CO	ERNS	GNRTR
8A	GESTETNER CORP 1212 E KAYELLA AVE ANAHEIM, CA 92803	170385 0.29 MI W																	X
8A	WESTRUX INTERNATIONAL TRUCKS 1110 E KATELLA ANAHEIM, CA 92805	345451 0.32 MI W													X				X
8A	WESTRUX INTRANTIONAL TRUCKS 1110 KATELLA AVENUE EAST ANAHEIM, CA	6715012 0.32 MI W						X											
8A	ORANGE EMPIRE 1000 E KATELLA ANAHEIM, CA 92805	311330 0.33 MI W				X	X												
8A	JAYCOX DISPOSAL 1016 E KATELLA AVE ANAHEIM, CA 92805	215339 0.33 MI W						X											X
8A	QUONG ENTERPRISES OFFICE:1111 E. KATELLA, ORANGE,CA 92 ORANGE, CA	6831879 0.33 MI W							X										
8A	ORANGE EMPIRE HEAT TREATING 1000 E KATELLA ST ANAHEIM, CA 92805	1600830 0.36 MI W																	X
8B	PACIFIC BELL 901 E KATELLA ANAHEIM, CA 92805	315758 0.39 MI W																	X
8B	UNOCAL SERVICE STATION 902 KATELLA AVE E. ANAHEIM, CA 92805	2747565 0.41 MI W										X							
8B	UNOCAL UNOCAL SS#8800 1818 SO. LEWIS ST. ANAHEIM, CA 92805	200097112 0.42 MI W																X	
8B	UNOCAL (SS 8800) 1818 S LEWIS ANAHEIM, CA 92805	4032658 0.42 MI W													X				
8B	UNOCAL UNOCAL SERVICE STATION 1818 S LEWIS ST ANAHEIM, CA	200093705 0.42 MI W																X	
8B	UNOCAL SERVICE STATION #8800 1818 LEWIS ST S. ANAHEIM, CA 92805	1204702 0.42 MI W						X			X								
8B	ACTION RENTALS INC 1822 S LEWIS ANAHEIM, CA 92805	110310 0.42 MI W													X				
8B	CLUTCH CO 1832 S LEWIS ANAHEIM, CA 92805	1281871 0.42 MI W																	X



X = search criteria; • = tag-along (beyond search criteria).

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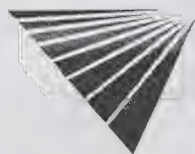
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MAP ID	PROPERTY AND THE ADJACENT AREA (within 1 1/8 miles)	VISTA ID DISTANCE DIRECTION	A			B						C				D			
			NPL	CORRACTS(TSD)	SPL	SCL	CERCLIS/INFRAP	TSD	LUST	SWLF	DEED RSTR	CORTESE	TOXIC PITS	RCRA VIOL	TRIS	UST/AST	UNIQUE CO	ERNS	GNRTR
8B	JOBBER MACHINE 1836 S LEWIS ANAHEIM, CA 92805	219136 0.43 MI W																	X
8B	NATIONAL CRANKSHAFT CO 1848 S LEWIS ST ANAHEIM, CA 92805	1269102 0.43 MI W																	X
8B	TSM DESIGN 1875 S LEWIS ANAHEIM, CA 92805	4987362 0.44 MI W															X		
9A	LIFE FLEET 1890 S BETMOR LN ANAHEIM, CA 92805	4866069 0.33 MI SW																	X
9A	BROWN AND CALDWELL LABORATORY 1200EAST PACIFICO ANAHEIM, CA 92805	59438 0.37 MI SW																	X
9A	CORE LABORATORIES INC 1200 PACIFICO AVE ANAHEIM, CA 92805	102284 0.37 MI SW																	X
9B	MIKES AUTOMOTIVE 1091 PACIFICO ANAHEIM, CA	1281715 0.40 MI SW															X		
9B	MER CEDES SHOP THE 1884 S SANTA CRUZ STE B ANAHEIM, CA 92805	1281875 0.41 MI SW																	X
9B	PACIFIC IMAGE CO 1875 S SANTA CRUZ ANAHEIM, CA 92805	4866989 0.42 MI SW																	X
9B	SCOTTS INDEPENDENT PORSCHE 1885 S SANTA CRUZ ANAHEIM, CA 92805	1285684 0.42 MI SW														X			
9B	AIRPORT COACH 917 E GENE AUTRY WY ANAHEIM, CA 92805	4062037 0.47 MI SW																	X
9B	RYDER STUDENT BUS SERVICE 917 GNE AUTRY AVE E. ANAHEIM, CA	3982194 0.47 MI SW							X			X							
9B	RYDER STUDENT TRANS CO 917 E PACIFICO ANAHEIM, CA 92805	1281810 0.47 MI SW														X			X
9B	SOUTHERN PACIFIC TRANSPORTATION CO LEWIS PACIFICO ANAHEIM, CA 92805	93923 0.48 MI SW															X		
10	ANAHEIM STADIUM 2000 S STATE COLLEGE ANAHEIM, CA 92806	21294 0.35 MI SE														X			X



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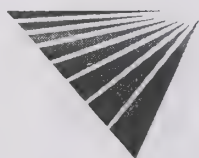
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MAP ID	PROPERTY AND THE ADJACENT AREA (within 1 1/8 miles)	VISTA ID DISTANCE DIRECTION	A				B						C				D	
			NPL	CORRACTS(TSD)	SPL	SCL	CERCLIS/NFRAP	TSD	LUST	SWLF	DEED RSTR	CORTESE	TOXIC PITS	RCRA VIOL	TRIS	UST/AST	UNIQUE CO	ERNS
11A	STATE COLLEGE PLAZA 2099 S STATE COLLEGE ANAHEIM, CA 92806	4043698 0.38 MI S														X		
11A	LAMCOR, INC. 2025 ORANGEWOOD AVENUE, EAST ANAHEIM, CA 92806	1183619 0.43 MI S						X										
11B	CITY OF ANAHEIM 2115 E ORANSWOOD AVE ANAHEIM, CA	200161465 0.45 MI S															X	
11B	PINATA FOODS 2125 E ORANGEWOOD ANAHEIM, CA 92806	1260598 0.45 MI S													X			
11B	EVEREST ELECTRONIC 2100 ORANGEWOOD AVENUE, EAST ANAHEIM, CA 92806	143919 0.46 MI S						X										
12A	SUMITOMO MACHINERY 1645 S SINCLAIR ANAHEIM, CA 92806	1281849 0.38 MI NE																X
12A	BENGE TRUMPET CO 1640 S SINCLAIR ANAHEIM, CA 92806	44085 0.38 MI NE																X
12A	MAC GLASHAN ENT DIV OF BV DIST CO 1641 S SINCLAIR ANAHEIM, CA 92806	253574 0.39 MI NE																X
12A	SMT DYNAMICS CORP 1621B S SINCLAIR ST ANAHEIM, CA 92806	1269371 0.41 MI NE																X
12B	MALIBU GRAND PRIX 2430 E KATELLA ANAHEIM, CA 92806	933016 0.40 MI E						X										X
13A	PACIFIC COAST SIGHTSEEING TOUR 1213 E HOWELL ANAHEIM, CA 92805	1281764 0.38 MI NW													X			
13A	WESTSIDE BUILDING MATERIALS 1111 HOWELL EAST ANAHEIM, CA	6714968 0.41 MI NW						X										
13B	GEORGIA PACIFIC CORPORATION 1700 S LEWIS ANAHEIM, CA 92805	3198642 0.47 MI W													X			
13B	ORANGE COUNTY REGISTER ANAHEIM PRINTING 1701 S LEWIS ST ANAHEIM, CA 92805	3198643 0.48 MI W																X



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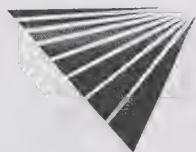
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			NPL	CORRACTS(TSD)	SPL	SCL	CERCLIS/INFRAP	TSD	LUST	SWLF	DEED RSTR	CORTESE	TOXIC PITS	RCRA VIOL	TRIS	UST/AST	UNIQUE CO	ERNS	GNRTR
14	SUPERIOR PLATING 1901 E CERRITOS AVE ANAHEIM, CA 92805	1600820 0.45 MI N																	X
14	THRIFTY CORPORATION 1601 E CERRITOS ANAHEIM, CA 92805	1186308 0.46 MI N													X				
15A	NEVILLE CHEMICAL 2201 CERRITOS AVE. E. ANAHEIM, CA 92806	293661 0.48 MI NE				X			X					X		X			
15A	NEVILLE CHEMICALS 2201 EAST CERRITOS AVE. ANAHEIM, CA 92805	200198835 0.48 MI NE																X	
15A	NEVILLE CHEMICAL CO 2201 EAST CERRITOS AVE ANAHEIM, CA 92804	200036443 0.48 MI NE																X	
15A	NEVILLE CHEMICALS 2201 EAST CERRITOS AVE. ANAHEIM, CA 92805	200015278 0.48 MI NE																X	
15A	NEVILLE CHEMICAL 2201 EAST CERRITOS AVE ANAHEIM, CA 92805	200060386 0.48 MI NE																X	
15A	NEVILLE CHEMICAL 2201 E CERRITOS ANAHEIM, CA 92805	200200670 0.48 MI NE																X	
15A	NEVILLE CHEMICALS 2201 EAST CERRITOS AVE. ANAHEIM, CA	200057601 0.48 MI NE																X	
15A	NEVILLE CHEM CO 2201 E CERRITOS AVE ANAHEIM, CA 92806	3194326 0.48 MI NE					X												X
15A	NEVILLE CHEMICALS 2201 EAST CERRITOS ANAHEIM, CA 92801	200004705 0.48 MI NE																X	
15A	NEVILLE CHEMICALS 2201 EAST CERRITOS AVE. ANAHEIM, CA 92805	200017900 0.48 MI NE																X	
15B	3 DAY BLINDS 2220 E CERRITOS ANAHEIM, CA 92806	3194327 0.52 MI NE																	X
15B	THREE DAY BLINDS INC 22220 E CERRITOS AVE ANAHEIM, CA 92806	5710378 0.52 MI NE																	X
16	UNITED COURIERS (FORMER TEXACO) 818 KATELLA AVE E. ANAHEIM, CA 92801	1291545 0.49 MI W							X		X								



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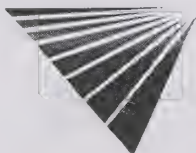
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			NPL	CORRACTS(TSD)	SPL	SCL	CERCLIS/NFRAP	TSD	LUST	SWLF	DEED RSTR	CORTESE	TOXIC PITS	RCRA VIOL	TRIS	UST/AST	UNIQUE CO	ERNS	GNRTR
17	PRINTED CIRCUIT BOARDS 1550 SOUTH SUNKIST DR. ANAHEIM, CA	200073568 0.52 MI NE																X	
17	FICHE FACTORY INC THE 1550 S SUNKIST SUITE G ANAHEIM, CA 92806	151205 0.52 MI NE																	X
17	TRAMER LITHO 1515 S SUNKIST ST ANAHEIM, CA 92806	428673 0.55 MI NE																	X
17	LIFE GUARD PRODUCTS INC 1630 S SUNKIST ST STE K ANAHEIM, CA 92806	6922670 0.56 MI NE																	X
17	STOLLE CORP 1580 HARRIS COURT ANAHEIM, CA 92806	401776 0.58 MI NE																	X
17	SMT DYNAMICS CORP 1551 S HARRIS CT ANAHEIM, CA 92806	1605924 0.59 MI NE																	X
18	SANHER WIRE WHEEL INC 2300 E ORANGEWOOD ANAHEIM, CA 92806	367442 0.54 MI SE																	X
18	ANAHEIM FIRE TRAINING CENTER 2400 E ORANGEWOOD ANAHEIM, CA 92806	1251263 0.58 MI SE												X					
19	UNKNOWN 1455 S. VERNON ANAHEIM, CA 92805	200026064 0.54 MI NW																X	
19	DIVERSIFIED CPC INTERNATIONAL 1455 S VERNON ANAHEIM, CA 92805	5521963 0.54 MI NW														X			
19	SANTA FE TRADING CO. 1415 VERNON ANAHEIM, CA 92805	4045837 0.58 MI NW													X				
20A	KEESE TANK CO 1928 S ANAHEIM ANAHEIM, CA 92802	1198609 0.54 MI W															X		
20A	WESTERN BRAKE SALES SERVICE 1904 S ANAHEIM A ANAHEIM, CA 92805	1281926 0.56 MI W															X		
20B	SUNWEST METALS INC 1874 S ANAHEIM ANAHEIM, CA 92805	4984152 0.58 MI W															X		
20B	JOHN DAVID INTERNATIONAL 1858 ANAHEIM BOULEVARD SOUTH ANAHEIM, CA 92805	3995427 0.59 MI W							X								X		



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MAP ID	PROPERTY AND THE ADJACENT AREA (within 1 1/8 miles)	VISTA ID DISTANCE DIRECTION	A				B					C				D		
			NPL	CORRACTS(TSD)	SPL	SCL	CERCLIS/NFRAP	TSD	LUST	SWLF	DEED RSTR	CORTESE	TOXIC PITS	RCRA VIOL	TRIS	UST/AST	UNIQUE CO	ERNS
20B	JOHN DAVID INTERNATIONAL 1858 ANAHEIM BLVD S. ANAHEIM, CA 92805	5351374 0.60 MI W									X							
20B	DUNN-EDWARDS CORPORATION 1901 SOUTH MANCHESTER AVE ANAHEIM, CA 92802	129409 0.64 MI W																X
20B	DUNN EDWARDS PAINT CORP. 1901 MANCHESTER AVENUE ANAHEIM, CA 92802	1586291 0.64 MI W						X										
21	DISTRIBUTED LOGIC CORP 1555 S SINCLAIR ST ANAHEIM, CA 92806	122970 0.55 MI NE																X
21	CYBERDISK INC 1531 S SINCLAIR ST ANAHEIM, CA 92806	110561 0.60 MI NE																X
22	R AND B ENTERP. (FOR.CHEVRON 1440 STATE COLLEGE BLVD SOUTH ANAHEIM, CA	4989867 0.55 MI N						X										
23	COORS DISTRIBUTING 1625 S LEWIS ANAHEIM, CA 92805	1281538 0.55 MI NW												X				X
24	BAUER JAGUAR 2001 S MANCHESTER ANAHEIM, CA 92802	39693 0.57 MI SW																X
24	BAUER MOTORS 2001 S MANCHESTER ANAHEIM, CA 92802	1281475 0.57 MI SW												X				
25	ALPHA LAP AND HONE 2165 S DUPONT STE L ANAHEIM, CA 92806	1281418 0.58 MI SE																X
25	PENTAFLEX, INC 2165D S DUPONT DRIVE ANAHEIM, CA 92806	1281773 0.58 MI SE																X
26	FIRST PHASE CONTRACTORS INC 477 N ANAHEIM ORANGE, CA 92668	1604139 0.59 MI SW														X		
26	BOBS AUTO SALON 425 N ANAHEIM ORANGE, CA 92668	3781198 0.61 MI S														X		
26	CORVETTE MIKE SERVICE 407 N ANAHEIM ORANGE, CA 92668	3593718 0.62 MI S														X		
27A	PRO PAK 1201 E CERRITOS AVE UNIT 121 ANAHEIM, CA 92805	5209385 0.59 MI NW																X

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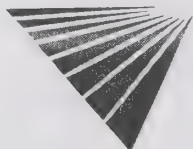
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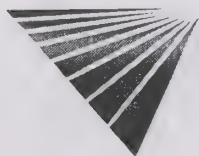
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MAP ID	PROPERTY AND THE ADJACENT AREA (within 1 1/8 miles)	VISTA ID DISTANCE DIRECTION	A			B						C				D		
			NPL	CORRACTS(TSD)	SPL	SCL	CERCLIS/NFRAP	TSD	LUST	SWLF	DEED RSTR	CORTESE	TOXIC PITS	RCRA VIOL	TRIS	UST/AST	UNIQUE CO	ERNS
27A	CITATION MILLS 1201 E CERRITOS AVE ANAHEIM, CA 92805	4061727 0.59 MI NW																X
27A	DENAR CORPORATION 901 E CERRITOS ANAHEIM, CA 92805	5619150 0.63 MI NW														X		
27A	STERI OSS INC 901 E CERRITOS AVE ANAHEIM, CA 92805	399359 0.63 MI NW																X
27B	CITY OF ANAHEIM SUBSTATION 826 E CERRITOS ANAHEIM, CA 92805	6947063 0.66 MI NW														X		
27B	CITY OF ANAHEIM SUBSTATION 826 E CERRITOS ANAHEIM, CA 92805	3995878 0.66 MI NW												X				
27B	AIRPORT SERVICE INC 851 E CERRITOS AVE ANAHEIM, CA 92805	9427 0.69 MI NW														X		X
27B	SEQUA CORPORATION 851 CERRITOS AVENUE EAST ANAHEIM, CA 92805	1584462 0.69 MI NW						X										
27B	MACK TRUCKS INC 851 E CERRITOS AVE ANAHEIM, CA 92805	3594237 0.69 MI NW																X
28	ORANGE COUNTY E M A KATELLA YARD 10852 DOUGLASS RD ANAHEIM, CA 92806	311262 0.61 MI E																X
28	TRANSPORTATION SHOP #2 10852 DOUGLASS ANAHEIM, CA 92806	1193819 0.61 MI E												X				
29A	TRACTOR INDUSTRIAL EQUIPMENT 620 E KATELLA ANAHEIM, CA 92804	1163941 0.62 MI W														X		
29A	ORANGE COUNTY AUTO 620 E KATELLA ANAHEIM, CA 92805	3197814 0.62 MI W																X
29A	LOS ANGELES FREIGHTLINER 700 E KATELLA ANAHEIM, CA 92805	6922389 0.63 MI W																X
29A	WESTSIDE MATERIALS 700 KATELLA AVENUE EAST ANAHEIM, CA 92805	933017 0.64 MI W						X										
29B	KATELLA SUBSTATION 500 E. KATELLA AVE. ANAHEIM, CA 92805	21292 0.67 MI W												X	X			



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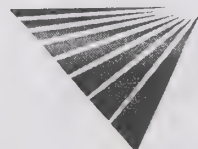
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MAP ID	PROPERTY AND THE ADJACENT AREA (within 1 1/8 miles)	VISTA ID DISTANCE DIRECTION	A			B							C			D			
			NPL	CORRACTS(TSD)	SPL	SCL	CERCLIS/NFRAP	TSD	LUST	SWLF	DEED RSTR	CORTESE	TOXIC PITS	RCRA VIOL	TRIS	UST/AST	UNIQUE CO	ERNS	GNRTR
29B	ODETICS INC 1859 S MANCHESTER AVE ANAHEIM, CA 92802	1601352 0.69 MI W																	X
29B	SATELLITE CLEANERS 1831 S MANCHESTER ANAHEIM, CA 92802	368624 0.71 MI W																	X
29B	DEWEY PEST CONTROL 1813 S MANCHESTER ANAHEIM, CA 92802	120670 0.71 MI W													X				X
30A	DATUM INC 1363 S STATE COLLEGE BLVD ANAHEIM, CA 92806	114225 0.65 MI N																	X
30A	PACIFIC SCIENTIFIC CO# 1346 S STATE COLLEGE BLVD ANAHEIM, CA 92806	317430 0.66 MI N											X						X
30A	PACIFIC SCENTIFIC SITE 1350 S STATE COLLEGE ANAHEIM, CA	7032966 0.66 MI N														X			
30A	PACIFIC SCIENTIFIC 1350 STATE COLLEGE BLVD S. ANAHEIM, CA 92806	4989866 0.70 MI N						X		X									
30B	MACHINING TIME SAVERS 1338 S STATE COLLEGE PKWY ANAHEIM, CA 92806	3768578 0.73 MI N																	X
30C	UNK 1323 S STATE COLLEGE BLVD AT *87 ANAHEIM, CA	200188444 0.77 MI N															X		
30C	CAC INDUSTRIAL 1323 STATE COLLEGE BLVD SOUTH ANAHEIM, CA 92806	933067 0.77 MI N						X											
30C	BECHLER CAMS, INC 1313 S STATE COLEGE PKWY ANAHEIM, CA 92806	41891 0.78 MI N																	X
31	HILTON SUITES 400 N STATE COLLEGE ORANGE, CA 92668	4043690 0.65 MI S													X				
31	AMS UHAUL RENTALS 320 N STATE COLLEGE ORANGE, CA 92668	3768576 0.71 MI S																	X
31	AMS RENTALS/OC EQUIPMENT 320 N STATE COLLEGE ORANGE, CA 92668	1284089 0.71 MI S														X			
32	C.O. THOMPSON PETROLEUM CO. 531 ANAHEIM BLVD ORANGE, CA 92668	5351367 0.67 MI S									X								



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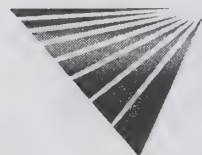
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MAP ID	PROPERTY AND THE ADJACENT AREA (within 1 1/8 miles)	VISTA ID DISTANCE DIRECTION	A			B					C				D				
			NPL	CORRACTS(TSD)	SPL	SCL	CERCLIS/NFRAP	TSD	LUST	SWLF	DEED RSTR	CORTESE	TOXIC PITS	RCRA VIOL	TRIS	UST/AST	UNIQUE CO	ERNS	GNRTR
32	ROGER'S AUTOMOTIVE INC 335 N ANAHEIM ORANGE, CA 92668	1284233 0.68 MI S														X	X		
32	C O THOMPSON PETROLEUM CO, INC 531 N ANAHEIM ORANGE, CA 92668	2747685 0.69 MI S						X								X			
33	ANAHEIM DUMP #6 NW KATELLA DOUGLAS ANAHEIM, CA	1590071 0.67 MI E							X										
33	BLECKERTS DIESEL REPAIR INC 1654 S DOUGLASS ANAHEIM, CA 92806	1281489 0.67 MI E														X			
33	TRUCPARCO 1650 DOUGLASS ANAHEIM, CA 92806	1281892 0.68 MI E														X			
34	UPS 1330 S. VERNON ANAHEIM, CA 92805	200023238 0.68 MI N																X	
34	UNITED PARCEL SERVICE INC 1331 S VERNON ANAHEIM, CA 92805	442040 0.69 MI N						X								X			
34	UNITED PARCEL SERVICE 1311 VERNON ST S. ANAHEIM, CA 92805	5359747 0.70 MI N									X								
35A	FRIAR TUX SHOP 1711 S CLAUDIANA ANAHEIM, CA 92805	6509030 0.70 MI W																	X
35B	SUNSET BUS AND EQUIPMENT 16555 S CLAUDINA WY ANAHEIM, CA 92801	4061573 0.74 MI W																	X
35B	ROLANDS EQUIPMENT CO INC 1631 S CLAUDINA WAY ANAHEIM, CA 92805	1281803 0.76 MI W																	X
36	PLAZA LANDSCAPE INC 1445 S SUNKIST ANAHEIM, CA 92806	4042358 0.71 MI NE														X			
36	ELECTRORACK PRODUCTS CO 1443 S SUNKIST ST ANAHEIM, CA 92806	136957 0.72 MI NE																	X
36	WEST COAST IRRIGATION SUPPLY C 1441 S SUNKIST ANAHEIM, CA 92806	4042357 0.73 MI NE						X								X			
37A	RUSSELL INVESTMENTS 2210 WINSTON ROAD EAST ANAHEIM, CA	1584688 0.72 MI N						X											



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MAP ID	PROPERTY AND THE ADJACENT AREA (within 1 1/8 miles)	VISTA ID DISTANCE DIRECTION	A				B						C				D	
			NPL	CORRACTS(TSD)	SPL	SCL	CERCLIS/NFRAP	TSD	LUST	SWLF	DEED RSTR	CORTESE	TOXIC PITS	RCRA VIOL	TRIS	UST/AST	UNIQUE CO	ERNS
37A	MCKESSON DRUG COMPANY 2121 WINSTON ROAD EAST ANAHEIM, CA	933034 0.74 MI N						X										
37B	CHEVRON 2299 WINSTON E. ANAHEIM, CA 92805	5360095 0.76 MI NE									X							
37B	CARLSON DESIGN CONSTRUCTION 2301 E WINSTON ANAHEIM, CA 92806	1285554 0.76 MI NE												X				
37C	CARLSON DESIGN 1281 S TALT ST ANAHEIM, CA 92806	70755 0.82 MI N																X
37C	ANAHEIM GEAR AND STANDARD 1271 S TALT AVE ANAHEIM, CA 92806	6680660 0.82 MI N																X
37C	CARLSON DESIGN AND CONSTRUCTIO 1270 TALT ANAHEIM, CA 92815	4044448 0.83 MI N												X				
37D	TECHNO COATINGS INC 1261 S SIMPSON CIRCLE ANAHEIM, CA 92806	418764 0.86 MI NE																X
37D	MULTIPLE PLANT SERVICES INC 1260 S SIMPSON CIR ANAHEIM, CA 92806	3768370 0.87 MI NE																X
38	MOELLER MFG AND SUPPLY INC 805 E CERRITOS AVE ANAHEIM, CA 92805	3766447 0.72 MI NW																X
38	WEYERHAEUSER CO 710 E CERRITOS ANAHEIM, CA 92805	1240056 0.74 MI NW												X				
38	HOMESTEAD HOUSE INC 530 E CERRITOS ANAHEIM, CA 92805	4023723 0.76 MI NW												X				
38	SILGAN PLASTICS CORPORATION 611 E. CERRITOS AVE ANAHEIM, CA 92805	1163368 0.77 MI NW																X
38	ORANGE COUNTY COLOR GRAPHICS 501 E. CERRITOS ANAHEIM, CA 92805	311264 0.78 MI NW											X					
39A	BENTLEY LABORATORIES INC 2118 W COLLINS AVE ORANGE, CA 92667	44549 0.76 MI E																X
39A	INLAND SPECIALTIES CHEMICAL CORP 2023 W COLLINS AVE ORANGE, CA 92667	209520 0.80 MI E			X	X		X										X

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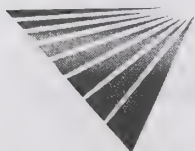
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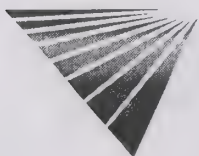
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			NPL	CORRACTS(TSD)	SPL	SCL	CERCLIS/NFRAP	TSD	LUST	SWLF	DEED RSTR	CORTESE	TOXIC PITS	RCRA VIOL	TRIS	UST/AST	UNIQUE CO	ERNS
39A	CA CENTRIFUGAL PUMP INC 2023 W COLLINS ORANGE, CA 92667	65110 0.80 MI E																X
39A	INLAND SPECIALTIES CHEMICAL CORPRATION 2023 COLLINS W. ORANGE, CA 92667	61101 0.80 MI E									X							
39A	LINDSTROM AMERICA 880 N. ECKHOFF ORANGE, CA 92668	200093084 0.82 MI E															X	
39B	SHAMROCK OF CA 957 N ECKHOFF ST ORANGE, CA 92667	375484 0.83 MI E																X
40A	CASADA ENGINEERING 1426 S ALLEC ANAHEIM, CA 92805	1281509 0.79 MI NW												X				
40A	COPIER SVC INC 1422 S ALLEC STE G ANAHEIM, CA 92805	3191706 0.83 MI NW																X
40A	PENHALL CO 1420 S ALLEC ST ANAHEIM, CA 92805	4061226 0.83 MI NW																X
40B	DAYS EXPRESS INC R ISON 1400 SOUTH ALLEC ANAHEIM, CA	200177102 0.87 MI NW															X	
40B	TECHNO COATINGS INC TECHNOWEST 1391 ALLEC ST ANAHEIM, CA 92805	5240961 0.89 MI NW																X
41	JACK CHRISMAN ENTERPRISES 1321 S LEWIS ANAHEIM, CA 92805	3198638 0.83 MI NW																X
41	THE SALVATION ARMY 1300 S LEWIS ANAHEIM, CA 92805	3595186 0.86 MI NW												X				
42A	VARCO 800-840 ECKHOFF ORANGE, CA 92668	451822 0.85 MI E														X		
42B	VARCO BJ DRILLING SYSTEMS INC 759 N ECKHOFF ST ORANGE, CA 92668	6509085 0.89 MI E																X
42B	LEARONOL 759 N. ECKHOFF ORANGE, CA 92668	200099844 0.89 MI E															X	
42B	PRO-FREIGHT 759 N. ECKHOFF ST. ORANGE, CA 92668	200099860 0.89 MI E															X	



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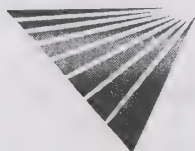
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MAP ID	PROPERTY AND THE ADJACENT AREA (within 1 1/8 miles)	VISTA ID DISTANCE DIRECTION	A			B						C				D			
			NPL	CORRACTS(TSD)	SPL	SCL	CERCLIS/NFRAP	TSD	LUST	SWLF	DEED RSTR	CORTESE	TOXIC PITS	RCRA VIOL	TRIS	UST/AST	UNIQUE CO	ERNS	GNRTR
42B	PRO-FREIGHT 759 N. ECKHOFF ST. ORANGE, CA 92668	200099848 0.89 MI E																X	
42B	YELLOW FREIGHT SYSTEM, INC. 700 N ECKHOFF ORANGE, CA 92668	478810 0.90 MI E							X						X				X
42B	HANDCRAFTED METAL 675 N ECKHOFF, UNIT F ORANGE, CA 92668	1284156 0.93 MI E																	X
42B	TOM MC EWEN RACING 675 N ECKOFF UNIT H ORANGE, CA 92668	426135 0.93 MI E																	X
42B	DANS MACHINE TOOL REPAIR 675 F NORTH ECKHOFF ORANGE, CA 92668	113480 0.93 MI E																	X
43	RYDER TRUCK RENTAL 1730 S ANAHEIM ANAHEIM, CA 92805	1281811 0.86 MI W							X						X	X			
43	CRUISE AMERICA 1710 S ANAHEIM ANAHEIM, CA 92805	107536 0.91 MI W													X				X
44A	F M F INDUSTRY 1240 SHERMAN ST ANAHEIM, CA 92805	155395 0.89 MI N																	X
44A	PRO CORPORATION THE 1241 S SHERMAN ST ANAHEIM, CA 92805	340156 0.89 MI N																	X
44A	C-CURE OF CALIFORNIA INC 1220 S SHERMAN ST ANAHEIM, CA 92805	74343 0.92 MI N																	X
44B	UNOCAL SERVICE STATION #6220 1201 STATE COLLEGE S. ANAHEIM, CA	5358876 0.92 MI N										X							
44B	UNOCAL #6220 1201 S STATE COLLEGE ANAHEIM, CA 92805	3596118 0.92 MI N													X				
44B	UNOCAL 1201 SOUTH STATE COLLEGE ANAHEIM, CA	200267182 0.92 MI N																X	
44B	UNOCAL SERVICE STATION #6220 1201 STATE COLLEGE BLVD SOUTH ANAHEIM, CA	4286704 0.92 MI N							X										
44B	CUSTOMER CARE SHELL 1200 S STATE COLLEGE ANAHEIM, CA 92805	4043695 0.92 MI N													X				



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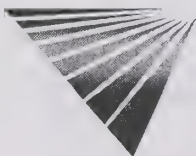
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MAP ID	PROPERTY AND THE ADJACENT AREA (within 1 1/8 miles)	VISTA ID DISTANCE DIRECTION	A			B						C				D		
			NPL	CORRACTS(TSD)	SPL	SCL	CERCLIS/NFRAP	TSD	LUST	SWLF	DEED RSTR	CORTESE	TOXIC PITS	RCRA VIOL	TRIS	UST/AST	UNIQUE CO	ERNS
44B	MOBIL SERVICE STATION #08-655 BALL ROAD EAST ANAHEIM, CA	933002 0.96 MI N						X										
44B	MOBIL OIL CORPORATION 1199 S STATE COLLEGE ANAHEIM, CA 92806	933041 0.96 MI N						X							X			
44B	EXXON #7-0732 1198 S STATE COLLEGE ANAHEIM, CA 92806	145937 0.97 MI N						X							X			X
44C	UNK 1834 E BALL RD ANAHEIM, CA	200131832 0.95 MI N															X	
44C	CUSTOM COATING 1834 E BALL AVE ANAHEIM, CA	200184936 0.95 MI N															X	
44C	ORANGE ENGINE REBUILDING INC 1911 E BALL RD ANAHEIM, CA 92805	1281754 0.96 MI N																X
44C	ROLLINS TRUCK LEASING 1801 E BALL ANAHEIM, CA 92805	359655 0.96 MI N						X		X					X			X
45	MOBIL STATION 100 E KATELLA ANAHEIM, CA 92802	1291542 0.89 MI W						X		X					X			X
45	TEXACO SERVICE STATION 100 KATELLA AVE E. ANAHEIM, CA 92802	5355450 0.93 MI W								X								
45	TEXACO (61-106-434) 100 W KATELLA ANAHEIM, CA 92802	1589908 0.94 MI W						X							X			X
45	AVIS 200 W KATELLA ANAHEIM, CA 92802	1238577 0.98 MI W													X			
45	HERTZ RENT A CAR 221 W KATELLA ANAHEIM, CA 92802	3197813 0.98 MI W													X			
46	FOSTER SAND GRAVEL N OF KATELLA E OF SANTA ANA RIVER ORANGE, CA	5739868 0.90 MI E							X									
47A	CORCORAN MFG CO INC 1745 S HASTER ST ANAHEIM, CA 92802	102203 0.92 MI W					X											X
47A	STEINER CORPORATION 1755 HASTER STREET SOUTH ANAHEIM, CA 92802	399032 0.92 MI W						X										



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MAP ID	PROPERTY AND THE ADJACENT AREA (within 1 1/8 miles)	VISTA ID DISTANCE DIRECTION	A			B							C			D			
			NPL	CORRACTS(TSD)	SPL	SCL	CERCLIS/NFRAP	TSD	LUST	SWLF	DEED RSTR	CORTESE	TOXIC PITS	RCRA VIOL	TRIS	UST/AST	UNIQUE CO	ERNS	GNRTR
47A	COWBOY AUTO 1763 HASTER ANAHEIM, CA 92802	4062202 0.92 MI W																	X
47B	MOTOR MART 1733 S ZEYN ANAHEIM, CA 92802	4990651 1.03 MI W															X		
48A	CREATIVE TECH SYSTEMS INC 190 STATE COLLEGE BLVD ORANGE, CA 92668	4063283 0.93 MI S																	X
48B	MOBIL SERVICE STATION #18-ENA 3011 CHAPMAN AVE W. ORANGE, CA 92668	20977 1.03 MI S							X		X								
49	SOUTHERN COUNTIES OIL 1825 W COLLINS ORANGE, CA 92667	1284243 0.94 MI E													X				
49	KERR DENTAL MATERIALS CENTER 1717 W COLLINS AVE ORANGE, CA 92667	6604401 0.99 MI E																	X
50A	COAST SIGN DISPLAY INC 1345 S ALLEC ST ANAHEIM, CA 92805	108063 0.95 MI NW																	X
50A	U.S. FILTER CONTINENTAL WESTERN WATER C 1340 ALLEC ST. ANAHEIM, CA 92805	222946 0.97 MI NW												X					
50B	CREST COATING INC 1332 1361 S ALLEC ANAHEIM, CA 92805	105975 1.00 MI NW																	X
50B	MONSANTO COMPANY 1339 S ALLEC ANAHEIM, CA 92805	282173 1.01 MI NW													X				
50B	TECHNO COATINGS INC 1339 ALLEC ST ANAHEIM, CA 92805	5240960 1.01 MI NW																	X
50B	CONTINENTAL WESTERN WATER 1340 ALLEC ANAHEIM, CA 92805	200052666 1.02 MI NW															X		
50B	SERICOL INC 1324 S ALLEC ST ANAHEIM, CA 92806	6508960 1.05 MI NW																	X
50B	OUTDOOR DIMENSIONS 1316 S ALLEC ST ANAHEIM, CA 92805	313278 1.09 MI NW																	X

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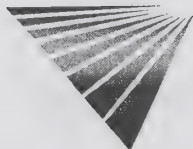
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MAP ID	PROPERTY AND THE ADJACENT AREA (within 1 1/8 miles)	VISTA ID DISTANCE DIRECTION	A				B						C				D	
			NPL	CORRACTS(TSD)	SPL	SCL	CERCLIS/NFRAP	TSD	LUST	SWLF	DEED RSTR	CORTESE	TOXIC PITS	RCRA VIOL	TRIS	UST/AST	UNIQUE CO	ERNS
51	DOUBLETREE HOTEL ORANGE COUNTY 100 THE CITY DRIVE ORANGE, CA 92668	4023945 0.96 MI S													X			
51	UCI MEDICAL CENTER 101 CITY DRIVE SOUTH ORANGE, CA	3981987 0.96 MI S						X										
51	AMI MAGNETIC IMAGING CTR UCI 101 THE CITY DR BLDG 22B ORANGE, CA 92668	3194451 0.96 MI S																X
52A	RESEX DIV SEYMOUR ELEC AUTO INC 1230 SOUTH LEWIS ST ANAHEIM, CA 92805	351090 0.96 MI NW																X
52B	OPTILINK CORPORATION 1000 E BALL RD ANAHEIM, CA 92805	311144 1.04 MI NW																X
52B	INTERSTATE ELECTRONICS 1001 BALL RD. E. ANAHEIM, CA 92805	933010 1.06 MI NW						X										
52C	PROSSER INDUSTRIES, INC 900 E BALL RD ANAHEIM, CA 92805	341042 1.08 MI NW																X
52C	POWER PARAGON INC 901 E BALL RD ANAHEIM, CA 92805	5351914 1.09 MI NW																X
53	WONDRIES TOYOTA OF ANAHEIM 1601 S ANAHEIM ANAHEIM, CA 92805	21296 0.96 MI W						X							X	X		
53	ALJO ENTERPRISES INC 1558 A S ANAHEIM BLVD ANAHEIM, CA 92805	3593724 0.97 MI W																X
53	VEGAS TRANSMISSIONS 1558 S ANAHEIM BLVD ANAHEIM, CA 92805	1281918 0.97 MI W																X
53	CAL DEPT OF TRANSPORTAION 1628 S ANAHEIM BLVD ANAHEIM, CA 92805	7031620 0.97 MI W																X
53	SHERWIN-WILLIAMS CO 1550 S ANAHEIM BLVD, SUITE A ANAHEIM, CA 92805	379453 0.98 MI W																X
53	DNR INDUSTRIES 1562 S ANAHEIM BLVD STE B ANAHEIM, CA 92805	7031619 1.00 MI W																X
54	CREATIVE PRESS 1600 E BALL RD ANAHEIM, CA 92805	1281872 0.97 MI N																X

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MAP ID	PROPERTY AND THE ADJACENT AREA (within 1 1/8 miles)	VISTA ID DISTANCE DIRECTION	A			B						C			D			
			NPL	CORRACTS(TSD)	SPL	SCL	CERCLIS/NFRAP	TSD	LUST	SWLF	DEED RSTR	CORTESE	TOXIC PITS	RCRA VIOL	TRIS	UST/AST	UNIQUE CO	ERNS
54	SARGENT-WELCH SCIENTIFIC CO 1617 BALL RD. E. ANAHEIM, CA 92805	368526 0.98 MI N							X							X		
54	SARGENT WELCH SCIENTIFIC COMPANY WAREHOUSE AT 1617 EAST BALL ROAD ANAHEIM, CA	300142740 0.98 MI N															X	
55A	OSCARS CLEANERS 2111 BALL ANAHEIM, CA 92806	312607 0.97 MI N																X
55B	ANAHEIM FIRE STATION # 7 2222 E BALL ANAHEIM, CA 92806	1251240 0.98 MI N													X			
56A	TISHMAN CHAPMAN VENTURE 3800 W CHAPMAN ORANGE, CA 92668	4021784 0.97 MI S													X			
56B	200 MANCHESTER VENTURE 200 S MANCHESTER ORANGE, CA 92668	4033860 1.04 MI S													X			
56B	THE CITY 1 CITY BLVD WEST ORANGE, CA 92668	4023944 1.06 MI S													X			
57	S S HEADERS 1401 E BALL RD STE C ANAHEIM, CA 92805	3192455 1.00 MI N																X
57	GANAHL LUMBER CO 1220 E BALL ANAHEIM, CA 92805	164281 1.00 MI N						X							X			X
57	ACTION CLEANERS 1201 E BALL RD ANAHEIM, CA 92805	5218 1.01 MI N																X
58	PETROLEUM DISTRIBUTORS 1800 BLOCK OF STRUCK AVE ORANGE, CA 92667	341739 1.00 MI E				X	X											
58	SCORE RIGHT PUBLISHING CO 1746 W KATELLA STE 4 ORANGE, CA 92667	3767256 1.05 MI E																X
58	PRECISION ENVIRONMENTAL LABS 1742 W KATELLA AVE STE 4 ORANGE, CA 92667	5520970 1.05 MI E																X
58	ADVANCED TECH AXLES 1744 W KATELLA AVE STE 2 ORANGE, CA 92667	6509178 1.05 MI E																X
58	ORANGE COAST FORD TRACTORS 1600 W KATELLA AVE ORANGE, CA 92667	311308 1.08 MI E																X

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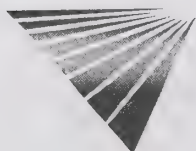
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MAP ID	PROPERTY AND THE ADJACENT AREA (within 1 1/8 miles)	VISTA ID DISTANCE DIRECTION	A			B						C				D		
			NPL	CORRACTS(TSD)	SPL	SCL	CERCLIS/NFRAP	TSD	LUST	SWLF	DEED RSTR	CORTESE	TOXIC PITS	RCRA VIOL	TRIS	UST/AST	UNIQUE CO	ERNS
59	PAUL-MUNROE HYDRAULICS INC. 1701 W SEQUOIA AVE ORANGE, CA 92668	321760 1.00 MI E											X			X		X
59	JOHN JEZOWSKI, INC. 748 N POPLAR ORANGE, CA 92668	1232959 1.02 MI E													X			X
59	PACIFIC DELIVERY SYSTEM 752 N POPLAR ST ORANGE, CA 92668	316286 1.02 MI E																X
60	BRINKMAN CO 571 N POPLAR ORANGE, CA	200107414 1.03 MI E															X	
61	CRYSTAL CATHEDRAL 12141 LEWIS FULLERTON, CA 92640	2747627 1.03 MI SW						X							X	X		
62	ARCO # 6132 MP G TUNE-UP 2445 E BALL ANAHEIM, CA 92806	1186304 1.05 MI NE						X							X	X		
62	ARCO ARCO STATION #6132 2445 EAST BALL RD ANAHEIM, CA 92805	200100887 1.05 MI NE															X	
62	STATE WIDE SALES CO INC 1301 S SUNKIST ANAHEIM, CA 92806	3202922 1.07 MI NE						X							X			
63	KING PLASTICS INC 840 N ELM ST ORANGE, CA 92668	1163557 1.06 MI E																X
63	DESIGNS ALIVE 845 N ELM ORANGE, CA 92667	119860 1.07 MI E																X
63	INNOVATIVE GRAPHICS INC 833 NORTH ELM ST ORANGE, CA 92667	209691 1.07 MI E																X
64A	ANIK STOP 1460 ANAHEIM BOULEVARD SOUTH ANAHEIM, CA 92805	1280984 1.07 MI NW						X										
64A	SUPER SHUTTLE 1430 S ANAHEIM BLVD ANAHEIM, CA 92805	4061276 1.11 MI NW																X
64B	JOHN PIERRE APPAREL 251 PALAIS ROAD EAST ANAHEIM, CA 92805	1193825 1 10 MI NW						X										
65	QUALITY LINCOLN MERCURY INC 1221 S AUTO CTR DR ANAHEIM, CA 92806	21281 1 07 MI NE																X

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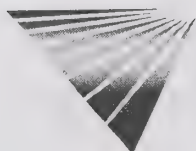
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MAP ID	PROPERTY AND THE ADJACENT AREA (within 1 1/8 miles)	VISTA ID DISTANCE DIRECTION	A			B							C			D		
			NPL	CORRACTS(TSD)	SPL	SCL	CERCLIS/NFRAP	TSD	LUST	SWLF	DEED RSTR	CORTESE	TOXIC PITS	RCRA VIOL	TRIS	UST/AST	UNIQUE CO	ERNS
65	QUALITY LINCOLN MERCURY 1221 S AUTO CENTER ANAHEIM, CA 92806	4019034 1.07 MI NE													X			
65	ANAHEIM DODGE 1271 S AUTO CENTER DR ANAHEIM, CA 92806	4865985 1.08 MI NE																X
65	ANAHEIM MITSUBISHI 1271 AUTO CENTER ANAHEIM, CA 92806	4019035 1.08 MI NE													X			
65	ANAHEIM MAZDA 1321 AUTO CENTER DR ANAHEIM, CA 92806	1281442 1.09 MI NE																X
65	ANAHEIM MAZDA 1321 S AUTO CENTER ANAHEIM, CA 92806	4019036 1.09 MI NE													X			
65	AUTO CENTER AUTO BODY 1331 S AUTO CENTER ANAHEIM, CA 92806	4019037 1.09 MI NE													X			
66	UNKNOWN CHAPMAN AVE AT SANTA ANA RIVER ** ORANGE, CA 92668	200101303 1.08 MI SE															X	
67	UNOCAL SERVICE STATION #4961 4105 W CHAPMAN ORANGE, CA 92668	1217679 1.09 MI SW							X						X			
67	BROWN AND CALDWELL CO. 4105 WEST CHAPMAN AVE ORANGE, CA 92668	200007039 1.09 MI SW															X	
67	BROWN AND CALDWELL CO. 4105 WEST CHAPMAN AVE ORANGE, CA	200008718 1.09 MI SW															X	
67	UNOCAL SERVICE STATION #4961 4105 CHAPMAN AVE W. ORANGE, CA 92668	5352857 1.10 MI SW									X							
67	PACIFIC BELL (CA-296) 4245 W CHAPMAN ORANGE, CA 92668	316044 1.12 MI SW													X			X
68A	CUSTOM LAMINATORS 1350 S CLAUDINA ANAHEIM, CA 92805	4022079 1.12 MI NW													X			
69	FLOUROCARBON CO 1754 S CLEMENTINE ST ANAHEIM, CA 92802	154577 1.12 MI W																X



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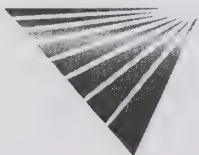
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MAP ID	SITES IN THE SURROUNDING AREA (within 1 1/8 - 1 1/4 miles)	VISTA ID DISTANCE DIRECTION	A				B						C				D	
			NPL	CORRACTS(TSD)	SPL	SCL	CERCLIS/NFRAP	TSD	LUST	SWLF	DEED RSTR	CORTESE	TOXIC PITS	RCRA VIOL	TRIS	UST/AST	UNIQUE CO	ERNS
68B	BELL INDUSTRIES 1304 CLAUDINA STREET SOUTH ANAHEIM, CA 92805	1193818 1.17 MI NW						X										
68B	AEROSCIENTIFIC CORP PLT 3 1244 S CLAUDINA ST ANAHEIM, CA 92805	1245237 1.23 MI NW						X								X		•
68B	AEROSCIENTIFIC CORPORATION II 1244 CLAUDINA STREET SOUTH ANAHEIM, CA	5199043 1.23 MI NW						X										
68B	AERO DDL 1244 CLAUDIA ST. S. ANAHEIM, CA	6563532 1.23 MI NW						X										
70A	ANAHEIM FIRE STATION # 3 1580 S CLEMENTINE ANAHEIM, CA 92802	1285518 1.15 MI W													X			
70B	ODETICS INC 1515 S MANCHESTER ANAHEIM, CA 92802	306254 1.24 MI W													X			•
71	PENSKE TRUCK LEASING INC 620 E BALL ANAHEIM, CA 92805	1281772 1.15 MI NW						X							X			
71	PENSKE TRUCK LEASING 620 BALL RD E. ANAHEIM, CA 928050000	5351913 1.15 MI NW									X							
71	CA-001 620 E. BALL RD. ANAHEIM, CA	5595965 1.15 MI NW													X			
71	WEYERHAEUSER 601 E. BALL RD. ANAHEIM, CA 92805	1216789 1.17 MI NW						X						X				
71	WEYERHAUSER PAPER COMPANY 601 BALL RD E. ANAHEIM, CA 92805	5351912 1.17 MI NW									X							
72	FURNITURE TRADITIONS INC. 1450 W. COLLINS AVE. ORANGE, CA 92667	5520379 1.17 MI E												X				
73	EAGLE CAR WASH 350 W KATELLA ANAHEIM, CA 92802	3078944 1.17 MI W									X				X			
73	KATELLA CAR WASH (FORMER) 350 KATELLA AVENUE WEST ANAHEIM, CA	6604785 1.17 MI W						X										
74	STEVENS METAL FINISHING 1607 W ORANGE GROVE D ORANGE, CA	6613571 1.17 MI E														X		



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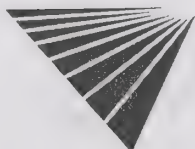
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MAP ID	SITES IN THE SURROUNDING AREA (within 1 1/8 - 1 1/4 miles)	VISTA ID DISTANCE DIRECTION	A			B						C			D				
			NPL	CORRACTS(TSD)	SPL	SCL	CERCLIS/NFRAP	TSD	LUST	SWLF	DEED RSTR	CORTESE	TOXIC PITS	RCRA VIOL	TRIS	UST/AST	UNIQUE CO	ERNS	GNRTR
74	ARMORED TRANSPORT OF CALIF,INC 1602 W ORANGE GROVE ORANGE, CA 92668	1249123 1.20 MI E														X			
74	ARMORED TRANSPORT 1602 ORANGE GROVE AVE WEST ORANGE, CA 92668	5715797 1.20 MI E							X										
74	WEBER WEBER 1449 W ORANGEGROVE ORANGE, CA 92668	4037223 1.25 MI E														X			
75	ORANGE CITY DUMP #2 SANTA ANA RIVER N SIDE OF KATELLA BETWEEN MAIN RIV ORANGE, CA 92667	86227 1.19 MI E								X									
76	UNOCAL SERVICE STATION #6297 2345 CHAPMAN AVENUE WEST ORANGE, CA	3193391 1.20 MI SE							X										
76	UNOCAL 76 SERVICE STN #6297 2345 W CHAPMAN ORANGE, CA 92668	4021778 1.20 MI SE														X			
76	ULTRAMAR STATION #748 2245 W CHAPMAN ORANGE, CA 92668	4021777 1.24 MI SE														X			
76	ULTRAMAR INC. (FAST GAS) 2245 CHAPMAN AVENUE WEST ORANGE, CA 92668	1589840 1.24 MI SE							X										
77A	ORANGE CITY OF - PROPERTY 1350 KATELLA AVENUE WEST ORANGE, CA	5355397 1.23 MI E							X										
77A	ORANGE CITY OF - PROPERTY 1350 KATELLA AVE W. ORANGE, CA 92667	1589910 1.23 MI E							X			X							
77B	ROADWAY EXPRESS, INC. 1130 N MAIN ORANGE, CA 92667	356577 1.24 MI E														X			•
77B	SAN DIEGO PIPELINE TERMINAL 1350 N MAIN ORANGE, CA 92667	1162842 1.24 MI E														X			
77B	SANTA FE PACIFIC PIPELINE 1350 N MAIN ORANGE, CA 92667	1284235 1.24 MI E															X		
78	CITY TOWER ORANGE 333 CITY BLVD. WEST ORANGE, CA 92668	4023946 1.23 MI S														X			



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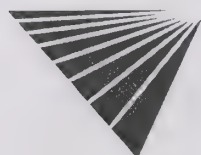
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MAP ID	SITES IN THE SURROUNDING AREA (within 1 1/4 - 1 1/2 miles)	VISTA ID DISTANCE DIRECTION	A			B							C			D		
			NPL	CORRACTS(TSD)	SPL	SCL	CERCLIS/NFRAP	TSD	LUST	SWLF	DEED RSTR	CORTESE	TOXIC PITS	RCRA VIOL	TRIS	UST/AST	UNIQUE CO	ERNS
79	HARDIN OLDSMOBILE HONDA 1300 S ANAHEIM ANAHEIM, CA 92805	1183666 1.27 MI NW						X							•			•
79	7 - ELEVEN FOOD STORES 107 W BALL ANAHEIM, CA 92805	1140 1.42 MI NW						X							•			
80	WEST AMERICAN RUBBER COMPANY 750 N MAIN ORANGE, CA 92668	476327 1.28 MI E						X							•			
80	ARROWHEAD MOUNTN SPRING WATER 619 N MAIN ORANGE, CA 92668	27443 1.33 MI E						X							•			•
81	GRUBBS DAVID 315 BALL ROAD EAST ANAHEIM, CA 92805	1292287 1.29 MI NW						X										
82	ALLEN ELECTRIC COMPANY 1212 W STRUCK ORANGE, CA 92667	1293006 1.33 MI E						X							•			
82	GERRARD INDUSTRIAL/ARCO GUNITE 1204 STRUCK AVENUE WEST ORANGE, CA 92667	3768613 1.33 MI E						X										
82	GERRARD INDUSTRIAL 1200 STRUCK AVENUE WEST ORANGE, CA 92665	3779004 1.33 MI E						X										
82	CADILLAC PLATING INC 1145-47 W STRUCK AVE ORANGE, CA 92667	1295987 1.37 MI E				X												•
83	OXYGEN SERVICE CO. 1011 W COLLINS ORANGE, CA 92667	1293001 1.41 MI E						X							•			
84	MOBIL SERVICE STATION #18-106 1800 HARBOR BLVD S. ANAHEIM, CA 92802	1285643 1.42 MI W						X			X							
85	UNOCAL SERVICE STATION #5618 591 CITY DR S. ORANGE, CA 92668	5353897 1.45 MI S										X						
86	UNKNOWN #8 E OF STATE COLLEGE WAGNER ANAHEIM, CA	1186260 1.45 MI N							X									
87	NISSAN OF ORANGE 1140 W KATELLA ORANGE, CA 92667	3594985 1.46 MI E						X							•			
88	GSA/TRANSPORTATION SERV STA #2 485 CITY DRIVE SOUTH ORANGE, CA 92668	3194452 1.50 MI S						X							•			



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MAP ID	SITES IN THE SURROUNDING AREA (within 1 1/2 - 2 miles)	VISTA ID DISTANCE DIRECTION	A				B							C				D	
			NPL	CORRACTS(TSD)	SPL	SCL	CERCLIS/NFRAP	TSD	LUST	SWLF	DEED RSTR	CORTESE	TOXIC PITS	RCRA VIOL	TRIS	UST/AST	UNIQUE CO	ERNS	GNRTR
89	ORANGE COUNTY ELECTRONICS CORP 810 W BARKLEY ORANGE, CA 92668	311253 1.59 MI E				X	•												
90	ORANGE COUNTY PLATING CO 940-950 N PARKER ST ORANGE, CA 92667	1284204 1.63 MI E				X	•		•								•		•
90	DUNHAM METAL PROCESSING 936 NORTH PARKER ORANGE, CA 92667	129273 1.63 MI E				X											•		•
91	COSDEN OIL CHEM CO 534 W STRUCK AVE ORANGE, CA 92667	103166 1.67 MI E				X	•												•
92	CONTINENTAL MOLDING 1841 BATAVIA STREET ORANGE, CA 92665	3077632 1.81 MI NE				X													
93	DIXCO 1014 E. ST S. ANAHEIM, CA 92805	123224 1.82 MI NW				X	•					•							
94	ORANGE PRECISION CIRCUITS 812 SOUTHERN AVE ORANGE, CA 92665	311380 1.98 MI NE	X		X	•								•					•

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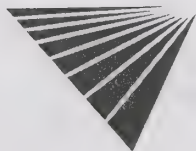
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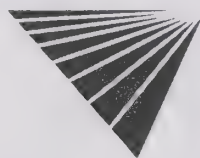
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UNMAPPED SITES	VISTA ID	A				B						C				D		
		NPL	CORRACTS(TSD)	SPL	SCL	CERCLIS/NFRAP	TSD	LUST	SWLF	DEED RSTR	CORTESE	TOXIC PITS	RCRA VIOL	TRIS	UST/AST	UNIQUE CO	ERNS	GNRTR
UCI MEDICAL CETER 101 CITY DR S. ORANGE, CA 92668	5353896									X								
CITY SHOPPING CENTER 3400 METROPOLITAN DRIVE ORANGE, CA 92668	7032526						X											
SERVICE MANUFACTURING AND ENERGY 2230 SOUTH DUPONT DR ANAHEIM, CA 92806	7031945																	X
O.C. GENERAL SERVICE AGENCY 10852 DOUGLASS RD ANAHEIM, CA 92806	5354028									X								
TRANSFER STATION III (DOUGLASS RD) 10621 DOUGLASS RD ANAHEIM, CA 92806	6831204							X										
O.C. GENERAL SERVICES AGENCY 10852 DOUGLASS ROAD ANAHEIM, CA 92806	1287331						X											
SERVICE STATION #4 10852 DOUGLASS ANAHEIM, CA 92806	3492030												X					
KATELLA YARD 10852 DOUGLASS RD ANAHEIM, 92806	4286008														X			
ANAHEIM MARRIOT 700 CONVENTION WAY WEST ANAHEIM, CA 92802	7031867						X											
ANAHEIM MITSUBISHI 1300 S AUTO CENTER DR ANAHEIM, CA 92806	7031653																	X
LA VICTORIA RACING 705 E DEBRA ANAHEIM, CA 92805	4061760																	X
BROOKHURST GARDENS/GEORGE RLTY 12862 BROOKHURST WAY FULLERTON, CA 92640	5352344									X								
BROOKS ALUMINUM RODS 735 E DEBRA LN ANAHEIM, CA 92805	7031921																	X
UOP CORP 2100 ORANGE THORPE AVE ANAHEIM, CA 92806	5241297																	X
HARRY JUNG ENTERPRISES KATELLA AVENUE WEST ANAHEIM, CA 92805	933036						X											



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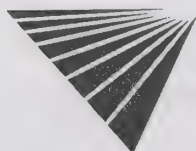
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UNMAPPED SITES	VISTA ID	A				B							C				D	
		NPL	CORRACTS(TSD)	SPL	SCL	CERCLIS/INFRAP	TSD	LUST	SWLF	DEED RSTR	CORTESE	TOXIC PITS	RCRA VIOL	TRIS	UST/AST	UNIQUE CO	ERNS	GNRTR
A PROFESSIONAL 13545 ANAHEIM BLVD ANAHEIM, CA 92805	5209238																	X
BERARD AUTO 3601 MIRA LOMA ANAHEIM, CA 92806	44709																	X
GSA SERVICE STATION #2 485 CITY DRIVE SOUTH ORANGE, CA 92668	6604472							X										
KIM RAMSEY MACHINE 3663 MIRA LOMA ANAHEIM, CA 92806	3199612																	X
PACIFIC BELL MARICOPA HIGHWAY HIGHWAY 99 ANAHEIM, CA 92802	314598																	X
WHEEL SPECIALTIES 2911 REDGUM STE 31 ANAHEIM, CA 92806	5521471																	X
GRAND HOTEL 1 HOTEL ANAHEIM, CA 92802	4029764													X				
MAGIC CARPET TRANSPORTATION 1202 W SHELLY CT ORANGE, CA 92668	3202450																	X
USPS SANTA ANA 3101 W SUNFLOWER SANTA ANA, CA 92799	4063136												X					X
STANDARD OIL OF CALIFORNIA 1425 FT. W OF EDWARDS 1085 FT. N O HUNTINGTON BEACH, CA	5739993								X									
STANDARD OIL COMPANY OF CALIFORNIA # 1425 FT W OF EDWARDS 1085 FT N OF HUNTINGTON BEACH, CA	6831413								X									
VILLA PARK DS #22/LOMA DS ORANGE CO. DISP. SITE NO.22-VILLA PA SANTA ANA, CA	5813353								X									
CONTINUOUS COATING CORPORATION 520 W GROVE ORANGE, CA	6948225															X		
FDIC (JONES LEASE) 10-ACRE PROPERTY E ALTA VISTA PLACENTIA, CA 92670	6514110															X		
MCCAIN TRUST/ORO BLOCK CO INC MAIN ST SANTA ANA, CA	5355878										X							



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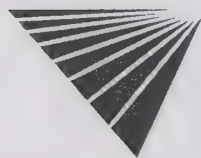
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UNMAPPED SITES	VISTA ID	A				B							C				D	
		NPL	CORRACTS(TSD)	SPL	SCL	CERCLIS/NFRAP	TSD	LUST	SWLF	DEED RSTR	CORTESE	TOXIC PITS	RCRA VIOL	TRIS	UST/AST	UNIQUE CO	ERNS	GNRTR
ORANGE CITY LANDFILL SANTA ANA RIVER GARDEN GROVE FREEW ORANGE, CA	6832519							X										
FOWLER EQUIPMENT AKA ORANGE CITY DUM BETW. CAMBRIDGE ST. TUSTIN AVE. ORANGE, CA	6832518							X										
MOFFET TRENCHES/TUSTIN MCAS LF JAMBOREE AND EDINGER TUSTIN, CA	6831264							X										
UNOCAL BIRCH HILLS PROJECT NW KRAEMER BREA, CA	6479581															X		
SW CORNER VON BUREN YORBA LINDA, CA	6612670															X		
COVINGTON - YARNEL OIL LEASES (UNOCAL) VAN BUREN JEFFERSON PLACENTIA, CA 92670	1284296															X		
BREA CITY PROPERTY BREA BREA, CA	4984546															X		
JONES LEASE E VAN BUREN PLACENTIA, CA 92670	1284320															X		
BREA GUN CLUB BREA OLINDA OIL FIELD BREA, CA	7031730															X		
CERRO VILLA HEIGHTS LANDFILL 1/4 MILE OF OF LOMA STREET 1000 FT. ORANGE, CA	5740175							X										
TRACT 14569 - HQT DEVELOPMENT LLC ALTA VISTA PLACENTIA, CA 92670	5520114															X		
SANTA ANA VALLEY IRRIGATION DUMP #1 E BANK OF SANTA ANA RIVER, S OF LINC SANTA ANA, CA	6830980							X										
UNION OIL DUMP #2 E OF SITE DR. N OF ORANGE FWY. BREA, CA	5740171							X										
ORANGE CITY DUMP #3 E SIDE OF CITY DR BTWN GRDN GRV BLVD ORANGE, CA	6830380							X										
SANTA FE PACIFIC REALITY @ FULLERTON FA MOORE MALVERN FULLERTON, CA	1606634															X		



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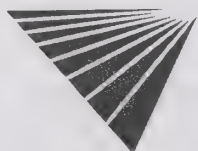
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UNMAPPED SITES	VISTA ID	A			B							C				D		
		NPL	CORRACTS(TSD)	SPL	SCL	CERCLIS/NFRAP	TSD	LUST	SWLF	DEED RSTR	CORTESE	TOXIC PITS	RCRA VIOL	TRIS	UST/AST	UNIQUE CO	ERNS	GNRTR
UNOCAL-HARTWELL STERNS LEASES VAN BUREN PINE PLACENTIA, CA 92670	1608333															X		
UNION OIL DUMP #1 S OF TONNER CANYON RD. E OF ORANGE F BREA, CA	1186261							X										
SANTA ANA VALLEY IRRIGATION DUMP #2 S OF LINCOLN AND BATAVIA ORANGE, CA 92665	1164416							X										
MUNOZ AUTO REPAIR AND TIRE SANTA ANA, CA	6830323							X										
KRAEMER TRACT 14569 PARCEL ALTA VISTA PLACENTIA, CA 92670	4984092															X		
PARKER BROS. DUMP N/A PREVIOUS INFO WAS INCORRECT BREA, CA	6832030							X										
JACK K. BRYANT ASSOC INC S OF MORSE AVE W OF VAN BUREN PLACENTIA, CA 92670	1186188							X										
CHEVRON WEST COYOTE OILFIELD N GILBERT FULLERTON, CA	7032125															X		
ALTA VISTA TRACTS-HASEKO TOWNHOMES CHAPMAN PLACENTIA, CA 92670	4984939															X		
UNOCAL - RICHFIELD SHOPPING CENTER NE ALTA VISTA PLACENTIA, CA 92670	6479909															X		
CHEVRON WEST COYOTE HILLS SITE 100 COYOTE HILLS FULLERTON, CA	6613121							X										
LA VETA STATION #2 NE CORNER OF LA VETA AMD TUSTIN ORANGE, CA	6831674							X										
J M PETERS CO FULLERTON SITE NE STATE COLLEGE FULLERTON, CA	5521734															X		
CERRO VILLA HEIGHTS DISPOSAL STATION 1/4 MI E OF LOMA ST 1000 FT SE OF ME ORANGE, CA	6832381							X										
SOLID WASTE SALVAGING FACILITY OLIND NORTH END OF VALENCIA AVENUE BREA, CA 92621	1186024							X										



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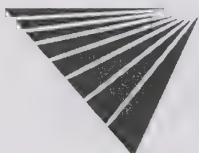
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UNMAPPED SITES	VISTA ID	A			B							C			D			
		NPL	CORRACTS(TSD)	SPL	SCL	CERCLIS/NFRAP	TSD	LUST	SWLF	DEED RSTR	CORTESE	TOXIC PITS	RCRA VIOL	TRIS	UST/AST	UNIQUE CO	ERNS	GNRTR
CWC INC - OLINDA HEIGHTS PROPERTY NE VALENCIA BREA, CA	6715560															X		
EASTERN TRANSPORTATION CORRIDOR PROJECT EASTERN TRANSPORTATION CORRIDOR ORANGE, CA	6613210															X		
MALVERN/DALE PLANNED DEVELOPMENT SE DALE BUENA PARK, CA	6613681															X		
CAL TRANS I-5 FWY BEACH BLVD BUENA PARK, CA	1604324															X		
TIC WINDMACHINE 250-4 IRVINE CENTER IRVINE, CA	5520895															X		
THE IRVINE CO FARM LAND IRVINE, CA 92720	3795736															X		
AQUA CHINON WASH ALONG SAN DIEGO CREEK IRVINE, CA	4826279							X										
TRANSIT MIXED CONCRETE CO. 9961 VALENCIA STREET IRVINE, CA	933460						X									X		
THE IRVINE COMPANY WINDMACHINES 131 1 IRVINE IRVINE, CA	6714985															X		
XEROX JAMBOREE/TELLER IRVINE, CA	6479600															X		
ORANGE COUNTY SHOOTING TRAINING CENTER NORTHERN EXTENSION OF JEFFREY IRVINE, CA	6613536															X		
STEPHAN CHEM ANAHEIM, CA	5517723															X		
SOUTHERN TANK LINES SE BALL ANAHEIM, CA 92806	3795568															X		
UNKNOWN #7 E OF STATE COLLEGE W OF PLACENTIA ANAHEIM, CA	1186259							X										
TREASURE FARMS #151-6 CULVER DR ANAHEIM, CA	5353171									X								



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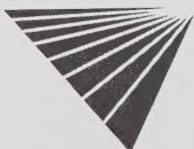
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UNMAPPED SITES	VISTA ID	A			B				C			D				
		NPL	CORRACTS(TSD)		CERCLIS/NFRAP											
		SPL			TSD	LUST										
		SCL														
CORONA DUMP ANAHEIM, CA	5738969							X								

VISTA ID
5738969



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